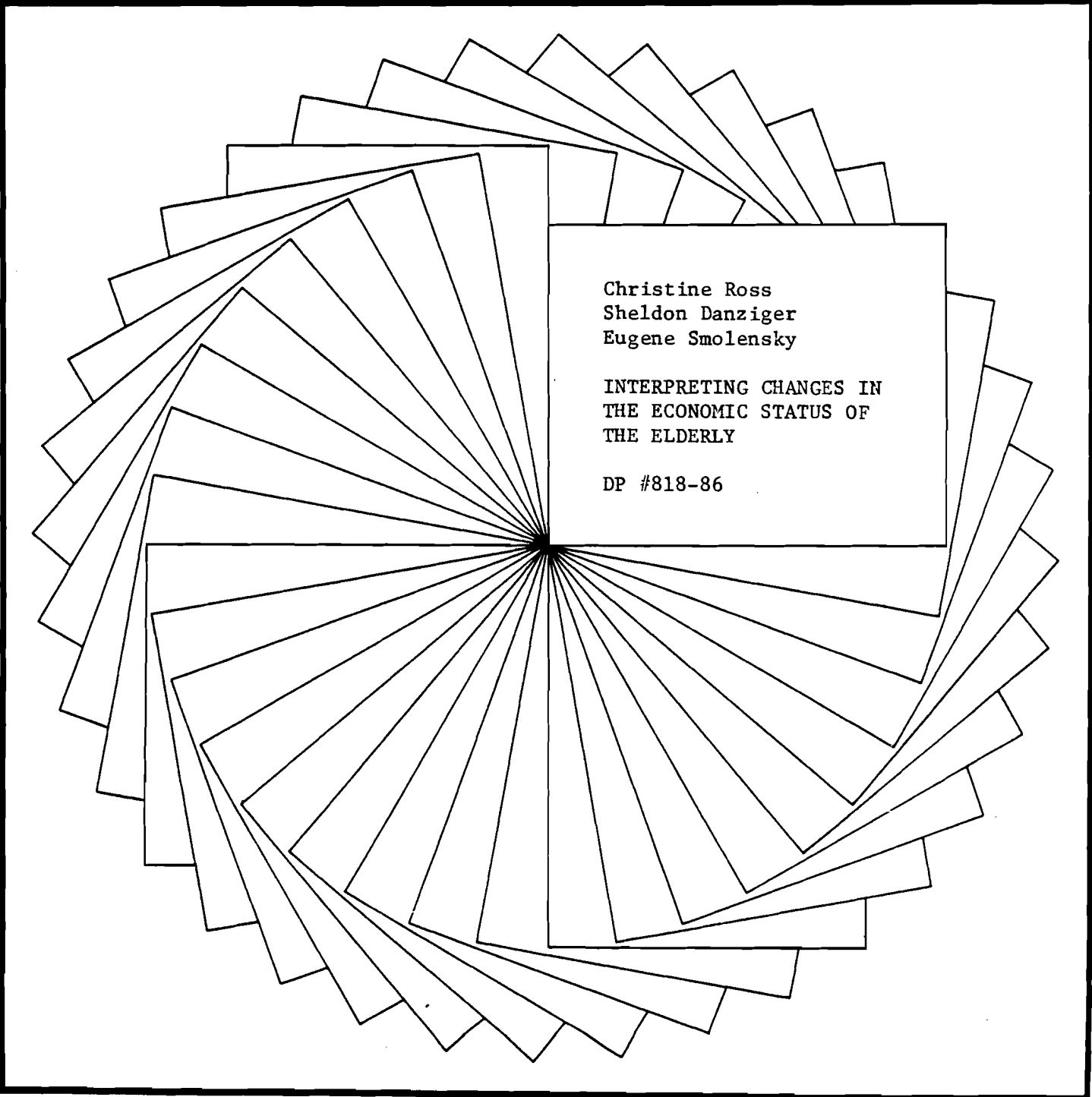


# IRP Discussion Papers

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INTERPRETING CHANGES IN  
THE ECONOMIC STATUS OF  
THE ELDERLY

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Interpreting Changes in the Economic Status of the Elderly,  
1949-1979

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## Abstract

This paper analyzes changes in the economic well-being of the elderly using data from the Decennial Censuses of 1950 through 1980. We find that the economic status of each successive elderly cohort is higher on average than that of the preceding cohort. Certain events associated with age--retirement for both men and women and widowhood for women--are associated with declining incomes. Controlling for sex, labor force participation, and marital status, however, the economic well-being of elderly cohorts generally increases with age.

Interpreting Changes in the Economic Status of the Elderly,  
1949-1979

I. INTRODUCTION

Numerous recent studies have shown that the economic well-being of the elderly has improved over the past two decades (e.g., Danziger et al., 1984a and b; Hurd and Shoven, 1985; Smeeding, 1985). Danziger and his colleagues find that in 1973 the mean economic status of the elderly was about 90.0 percent of that of the nonelderly; Smeeding concludes that by 1979 the mean economic status of the elderly was 10 to 15 percent higher than that of the nonelderly. Yet, Duncan, Hill, and Rodgers (1985) suggest that the apparent gains in the economic status of the elderly are a misinterpretation of the evidence. For the period 1968 through 1982, they conclude that "...the elderly experienced a substantial drop in economic status with the passage of time. The only reason that the elderly as a group appear to improve their economic position over time is because new cohorts enter old age in a considerably better financial position than previous cohorts."

In this paper, we reconcile these conflicting views. Using microeconomic data from the Censuses of 1950 through 1980, we reexamine the hypotheses (1) that the economic status of the elderly taken as a group has improved, but (2) that elderly individuals have had declining economic status as they age.

We confirm that the first hypothesis, over which there is agreement for the period since the late 1960s, is also valid for the thirty-year period beginning in 1949. The validity of the second hypothesis,

however, depends on how one accounts for demographic changes and changes in retirement patterns. We show that the decline in the average income of elderly cohorts as they age is apparent only when one examines data that do not differentiate between demographic and economic changes. The elderly do experience large, one-time income declines upon retirement for both men and women, and upon widowhood for women. If one controls for sex, labor force participation, and marital status, however, the economic well-being of elderly cohorts generally increases with age over any ten-year period.<sup>1</sup>

The next section briefly describes our data and measures of economic status. The third extends the analysis by Danziger and his colleagues and Smeeding of the economic status of the elderly relative to the nonelderly to the thirty-year period, 1949 to 1979. We find increases in mean incomes that are greater for the elderly than for the nonelderly. The fourth extends the analysis of Duncan, Hill, and Rodgers, by examining changes in the average income of elderly cohorts over the thirty-year period. Like Duncan and his associates, we find that the average income of many cohorts does decline with age if no account is taken of sex, or of changes in labor force participation and marital status.

The fifth section analyzes the economic status of aged cohorts classified by sex, labor force participation, and marital status. We find that the decline in average incomes of cohorts of elderly persons is not due to their getting older, with marital status and labor force participation unchanged, but to changes in income which occur at retirement and at widowhood. Thus, the declines in income as a cohort

ages are due to a change in the composition of the population, from married and working men and women to retirees and widows, rather than to aging itself. The last section concludes the paper.

## II. THE DATA AND MEASURES OF ECONOMIC STATUS

We use the public use microdata files of the Decennial Censuses of 1950 through 1980. For the Censuses of 1960-1980, we analyze the incomes of all individuals in a given age group. For 1950, however, the Census provided household income information only for household heads and persons living alone.<sup>2</sup> Our measures of economic status are based on a household's total money income from all sources. Each individual in the household is assumed to share equally that income.<sup>3</sup>

The advantages of Census microdata over other data sets such as the Retirement History Study or the Panel Study of Income Dynamics are first, a much larger sample size, and second, a much longer time period (1949 to 1979). This allows us to examine numerous cohorts as they age and to follow them through a larger proportion of their lifetime than we could with any alternative data source. However, the data do not follow particular individuals through income transitions so we do not know the actual experiences of individuals as they age. Therefore, our conclusions are expressed in terms of the "randomly chosen" individual in any cohort, who is a hypothetical person with the average characteristics of the cohort as s/he ages.

We use two measures of economic status--the mean of the ratio of household income to the poverty line for persons (the income-to-needs ratio) and the percentage of persons who live in households with incomes

below the poverty line.<sup>4</sup> These measures adjust for changes in both family size and prices over the thirty-year period. For example, in 1979, the poverty line for an aged couple was \$4392. If a couple's income that year was \$8784, we would count two persons with an income-to-needs ratio of 2.0. Persons with a ratio below 1.0 are poor.

### III. THE TRENDS IN INCOME AND POVERTY FOR THE ELDERLY RELATIVE TO THE NONELDERLY, 1949-1979

Table 1 compares the average ratio of household income to the poverty line (income-to-needs ratio) for nonelderly and elderly men and women.

Table 2 compares the percentages of men and women in poverty.

In 1949, the poverty rates for elderly persons were much greater than those for similar nonelderly persons, and their average income-to-needs ratios were much lower. Between 1949 and 1979, however, average incomes adjusted for needs of elderly persons increased much faster than those of the nonelderly. Poverty declined by approximately the same amount in percentage terms for both elderly and nonelderly, with the most rapid relative gains for the elderly occurring between 1969 and 1979.

Thus, if we want to know whether "the elderly" of 1979 had higher economic status than "the elderly" of earlier years, the answer would be "yes." An elderly person chosen at random in 1979 would have had a much higher income and a much smaller chance of being poor than an elderly person chosen at random in 1949.

Table 1  
Average Household Income-to-Needs Ratios,  
by Sex and Age, 1949-1979

Age and Sex of Persons	1949	1959	1969	1979	Percentage Change, 1949-79
Nonelderly (ages 25-64)					
Men	1.73	2.71	3.71	3.77	+117.9
Women	1.14	2.57	3.45	3.50	+207.0
Elderly (ages 65+)					
Men	1.20	2.14	2.76	3.06	+155.0
Women	0.79	1.91	2.40	2.62	+231.6

Source: For all tables, computations by authors from Decennial Census computer tapes for 1950, 1960, 1970, and 1980. For 1949, the sample consists only of household heads and unrelated individuals. In all other years, the sample includes all persons.

Note: Income-to-needs ratio is the mean ratio of household income to the poverty line. A ratio below 1.0 means that the average person in the group had income below the poverty line. Ratios are corrected for price changes and differences in family size in each year.



Table 2

Percentage of Persons Living in Households with  
Income below Poverty Lines, 1949-1979

Age and Sex of Individual	1949	1959	1969	1979	Percentage Change, 1949-79
<b>Nonelderly (ages 25-64)</b>					
Men	30.2	14.2	7.4	7.5	-75.2
Women	54.9	17.9	11.4	10.7	-80.5
<b>Elderly (ages 65+)</b>					
Men	59.4	33.1	23.1	15.2	-74.4
Women	75.7	40.0	31.9	21.5	-71.6

## IV. THE TREND IN INCOME FOR AGE COHORTS OF THE ELDERLY, 1949-1979

Table 3 replicates the type of cohort analysis undertaken by Duncan, Hill, and Rodgers (1985). They used data from the Panel Study of Income Dynamics and followed two cohorts for 15 years. We use the Census data to follow six cohorts (each row) for either 20 or 30 years. Following Duncan, Hill, and Rodgers, we show income-to-needs ratios for 5-year cohorts that include both men and women. The first column shows the four cohorts that were ages 45-49 and ages 50-54 in 1949 and 1959; the second column shows these cohorts 10 years later and two cohorts that were ages 55-59 and 60-64 in 1949. By following a cohort in any particular row across the columns, we find its mean income-to-needs ratio as it ages.

Two caveats for interpreting the changing economic status of a cohort as it ages are in order. First, changing family size will cause economic status to change even if income is constant, because the denominator of the income-to-needs ratio is related to family size. Since family size declines as a cohort ages, first as children leave the home, and then as spouses die, income-to-needs ratios will increase even if money incomes remain constant. Second, we do not correct for differential mortality or institutionalization. Thus, as cohorts age, if economic status is negatively related to these events, our trends will be biased upwards.

Table 3 reveals a complex pattern in which the economic performance of a time period interacts with a cohort's aging in a systematic way. Thus, between 1949 and 1959 each age cohort experienced a larger absolute gain in its income-to-needs ratio than in any other decade. It is the only decade, for example, in which a cohort's income increased as its members aged from 60-64 to 70-74 (from 1.52 to 1.91). In the sixties,

Table 3

The Effect of Aging on Economic Status:  
Average Household Income-to-Needs Ratios for Selected  
Cohorts of Males and Females, 1949-1979

(1)	(2)	(3)	(4)	(5)
<u>Age 45-49 in 1959</u>	<u>Age 55-59 in 1969</u>	<u>Age 65-69 in 1979</u>		
2.90	4.01	3.08		
<u>Age 50-54 in 1959</u>	<u>Age 60-64 in 1969</u>	<u>Age 70-74 in 1979</u>		
3.07	3.56	2.73		
<u>Age 45-49 in 1949</u>	<u>Age 55-59 in 1959</u>	<u>Age 65-69 in 1969</u>	<u>Age 75-79 in 1979</u>	
1.75	2.93	2.84	2.55	
<u>Age 50-54 in 1949</u>	<u>Age 60-64 in 1959</u>	<u>Age 70-74 in 1969</u>	<u>Age 80-84 in 1979</u>	
1.83	2.67	2.47	2.53	
	<u>Age 55-59 in 1949</u>	<u>Age 65-69 in 1959</u>	<u>Age 75-79 in 1969</u>	<u>Age 85+ in 1979</u>
	1.72	2.24	2.31	2.59
	<u>Age 60-64 in 1949</u>	<u>Age 70-74 in 1959</u>	<u>Age 80-84 in 1969</u>	
	1.52	1.91	2.24	

each cohort experienced a smaller gain in its income-to-needs ratio than in the fifties and two of the six cohorts had income declines. The gains for each age group were smaller still in the seventies, and three of the six cohorts had declines.

The relationship between income growth over a decade and cohort age also changed significantly over the period. In the 1950s, absolute increases in income were inversely related to age. Thus, the cohort aged 45-49 in 1949 experienced an increase of 1.18 over the decade (from 1.75 to 2.93), while the cohort 60-64 saw its ratio grow by 0.39. In the 1960s, this pattern became U-shaped. The cohort aged 60-64 in 1959 experienced the greatest decline of any cohort (from 2.67 to 2.47). The oldest cohort, aged 70-74, experienced a relatively large gain (from 1.91 to 2.24), although not so large as that experienced by the cohort that was 45-49 (from 2.90 to 4.01).

In the 1970s, the pattern of growth across the cohorts was the inverse of that of the 1950s. In the 1970s, income gains were positively and monotonically associated with cohort age. The cohort aged 55-59 in 1969 saw its ratio decline by 0.93 while that of the cohort 60-64 declined by 0.83. However, the ratios of the two oldest cohorts, ages 70-74 and 75-79 in 1969, actually rose during the 1970s.

How do these complex and varying patterns of income change relate to the findings of Duncan, Hill, and Rodgers? In Table 3, as they have shown, cohorts entering old age (compare columns 2 and 3) in most cases have declining average income. And, each cohort enters the retirement age with higher economic status than the previous cohort. However, the general trend is for increases at later ages. Income-to-needs ratios

increased for three cohorts who were 70-74 in 1959 and 1969 and 75-79 in 1969.

We summarize our results as follows. First, if we chose a 65-year-old person at random in 1979, we would in most cases expect that person to have a lower income-to-needs ratio than a person chosen at random from the same age cohort a decade earlier.<sup>5</sup> Second, if we randomly chose a person age 65 in 1979, s/he would have a higher income-to-needs ratio than a randomly chosen person age 65 in an earlier cohort.

Such findings led Duncan and his colleagues to their conclusion that the only reason for improvement in the economic status of the elderly as a whole over time was because between decades the oldest among the elderly are the most likely to die, and they belong to cohorts with the lowest incomes. Those who turn 65 will on average have higher incomes than those already elderly. Thus, the changing age composition of the elderly raises their economic status. But, as we show below, the data in Table 3 do not account for the other characteristics of cohorts that change as they age. In the next section, we further disaggregate the data for these cohorts and offer a quite different explanation.

#### V. ACCOUNTING FOR CHANGES IN THE ECONOMIC STATUS OF ELDERLY COHORTS AS THEY AGE

Knowing that average income-to-needs ratios decline for elderly cohorts as they age does not account for the sources of these declines. Duncan, Hill, and Rodgers justify their findings with reference to life-cycle income patterns. An individual's income rises during working years, then declines with retirement and thereafter. They also find that

elderly women living alone have significantly lower incomes than women living with a husband. Burkhauser, Holden, and Myers (1986) also find that change in marital status is a very important reason for declining economic status of elderly women.

To account for factors that influence the well-being of a cohort as it ages, we separate elderly individuals not just by age cohort as in the previous section, but also by sex, labor force participation, and marital status. When we do, we find that retirement for men brings a large income decline, but the decline is then followed by income increases for retirees. For women, widowhood brings a large income decline which is followed by slow or no increases thereafter.

Our analysis suggests that the typical random individual from a cohort experiences increases in income relative to needs during working years, then a large discrete decline in income-to-needs ratio with retirement, but increases thereafter. Married women share the changes in income of their husbands, but have an additional drop in income if they become widows. After that point, income increases slowly.

#### The Record for Elderly Men

The data in Table 3 show the largest income declines for cohorts in the ages from 55 to 75, during which workers retire from the labor force. Because retirees do not replace 100 percent of their earnings with retirement income, we find it remarkable how close the post-retirement mean incomes of elderly cohorts are to their pre-retirement mean incomes. For example, we found that men who were ages 55-64 in 1969, a cohort analyzed by the Duncan group, had a high rate of labor force

participation (84.7 percent) and a mean income of 4.10 times the poverty line (data not shown). In 1979, about two-thirds of the cohort, now ages 65-74, were retired, yet mean income dropped only 22 percent, to 3.20 times the poverty line. Those who were 65-74 in 1969 experienced a decline in income-to-needs ratio of only 6.1 percent (from 2.93 to 2.75) even though their labor force participation rate also dropped by two-thirds (from 41.0 to 16.1 percent).

These results suggest that the lower income-to-needs ratios of retirees in a cohort pull down the ratios for all cohort members. But a retired person has more leisure time than someone who is working. Thus, any evaluation of changes in mean income-to-needs ratios alone--as appears here and in most of the literature on the economic status of the elderly--will understate any change in economic well-being of a given cohort as it ages.

In Table 4, we examine the economic status of cohorts of men, classified by labor force participation, to control roughly for differences in leisure. The left-hand side of the table shows average income-to-needs ratios for workers, and the right-hand side shows these ratios for retirees (defined as those who did not work at all during the year). The columns show the ratios for different cohorts at approximately the same ages in different years. The rows show the ratios for a particular cohort as it ages. The second and third columns for any row compare workers and retirees from the same cohort in the various censuses. For example, the first row shows the cohort of men who were 60-64 in 1969. Average income-to-needs ratios for workers was 4.47, while the mean for retirees of that age in the same year was 2.01 (less than half).

Table 4

Average Ratio of Household Income to Needs  
in Work and Retirement, for Men, 1949-1979  
(Arranged from Youngest to Oldest Cohorts)

Household Income-to-Needs Ratio When Man Works		Household Income-to-Needs Ratio When Man Is Retired		
(1)	(2)	(3)	(4)	(5)
<u>Age 50-54 in 1959</u>	<u>Age 60-64 in 1969</u>	<u>Age 60-64 in 1969</u>	<u>Age 70-74 in 1979</u>	
3.22	4.47	2.01	2.54	
<u>Age 55-59 in 1959</u>	<u>Age 65-69 in 1969</u>	<u>Age 65-69 in 1969</u>	<u>Age 75-79 in 1979</u>	
3.27	4.10	2.16	2.43	
<u>Age 50-54 in 1949</u>	<u>Age 60-64 in 1959</u>	<u>Age 60-64 in 1959</u>	<u>Age 70-74 in 1969</u>	<u>Age 80-84 in 1979</u>
2.05	3.23	1.46	2.13	2.45
<u>Age 55-59 in 1949</u>	<u>Age 65-69 in 1959</u>	<u>Age 65-69 in 1959</u>	<u>Age 75-79 in 1969</u>	<u>Age 85+ in 1979</u>
2.00	3.08	1.68	2.05	2.55
	<u>Age 60-64 in 1949</u>	<u>Age 60-64 in 1949</u>	<u>Age 70-74 in 1959</u>	<u>Age 80-84 in 1969</u>
	1.90	0.81	1.56	2.02
	<u>Age 65-69 in 1949</u>	<u>Age 65-69 in 1949</u>	<u>Age 75-79 in 1959</u>	<u>Age 85+ in 1969</u>
	1.77	0.80	1.50	2.03
			<u>Age 70-74 in 1949</u>	<u>Age 80-84 in 1959</u>
			0.75	1.60
			<u>Age 75-79 in 1949</u>	<u>Age 85+ in 1959</u>
			0.77	1.70



These comparisons do not imply that anyone in that cohort would have a household income-to-needs ratio of 4.47 if he worked, and a ratio of 2.01 if he retired, because the means for workers and retirees are subject to selection bias. Cohort members who continue to work are expected to be higher-than-average earners, thus raising the mean for workers relative to the mean for everyone in the cohort if all continued to work. By this logic, the decline in average income for retirees shown in columns 2 and 3 overstates the actual decline in income that a particular individual would be likely to experience upon retirement.

For retirees of every cohort, the average income-to-needs ratio increases over a decade (compare column 4 to 3 and column 5 to 4 in every row). Again, the selection bias argument--this time, that higher-than-average earners are expected both to retire later and to live longer--implies that some of this increase is due to wealthier members of the cohort entering retirement.

Without individual income trajectories, as are available in panel data sets, we cannot rigorously account for selection bias. However, we roughly controlled for differential retirement and longevity by using educational attainment as a proxy for permanent income. Those results, shown in Appendix Table A, confirm what is shown in Table 4--at retirement, income drops sharply; after retirement, income increases as the cohorts age.

We believe that a plausible characterization of the economic status of an elderly man as he ages is as follows. First, a one-time decline in income is experienced at retirement. Second, growth in retirement income from social security and pension increases have exceeded the rate of

inflation, and hence, the increase in the income-to-needs ratios for retirees. When a large proportion of the cohort retires, the one-time decline in individual incomes dominates the data. However, once labor force status stabilizes (at the oldest age categories), it is the increases in retirement income (or declines in family size; not analyzed here) which are dominant.

The pattern of increasing average income in years after retirement characterizes the experience of all of the cohorts shown in Table 4. In fact, the mean income-to-needs ratio of those 80-84 and those 85 and older in 1979 was higher than it had been thirty years earlier when most of those in the cohorts were working (compare column 5 to column 1). However, because of the social security changes of the 1949-1979 period, those who were elderly in 1979 probably have received the largest real income increases during retirement of any of the cohorts preceding or following them. Nonetheless, as long as social security benefits do not decline in real terms, we would still not expect future cohorts of retirees to have declining real incomes as they age.

#### The Record for Elderly Women

The time path of income for elderly women is somewhat different from that for men. Wives typically share the decline in income associated with their husbands' retirement and the subsequent rise in transfer income. Women who work and head their own households experience a large drop in income upon retirement similar to that of male retirees. Finally, women who are widowed experience a substantial decline in income from previously established income levels.

Our cross-sectional data present even greater problems for analyzing the well-being of women as they age. While we can assume that an elderly man who is not working in a given year actually did work in a previous year, it is not reasonable to make a similar assumption for many women. Therefore, if a woman who does not have a husband is not currently working, it is impossible to know if she ever worked. Similarly if a woman is a widow, we do not know if the change in marital status is recent, or whether it was so long ago that she has been working and setting aside a retirement fund for several decades. For this reason, the analysis of changes in income with changes in labor force participation is more difficult for women.

The analysis of changes in income with labor force status is therefore confined to those women who have never married (less than 10 percent of a typical cohort) and thus can be expected to have had considerable labor force attachment. These numbers are meant to describe the changes in income of any woman with substantial labor force attachment, not only this 10 percent. Presumably these numbers should establish an upper bound on the income available to a woman who worked at some point in her life. Since we can only base these figures on a small sample, however, conclusions about the pattern of income changes for cohorts of women as they age are more tentative than those for men.

Table 5 shows average income-to-needs ratios for cohorts of never-married women as they age, for workers at early ages, and for nonworkers at older ages. Read across a row to find income-to-needs ratios for a particular cohort as it ages. Read down a column to compare ratios for similar age groups in different years.

Table 5

Average Ratio of Household Income to Needs for Workers and  
Nonworkers, for Never-Married Women, 1949-1979  
(Arranged from Youngest to Oldest Cohorts)

Household Income-to-Needs Ratio When Woman Works		Household Income-to-Needs Ratio When Woman Is Not Working		
(1)	(2)	(3)	(4)	(5)
<u>Age 50-54 in 1959</u>	<u>Age 60-64 in 1969</u>	<u>Age 60-64 in 1969</u>	<u>Age 70-74 in 1979</u>	
3.12	3.84	2.01	2.35	
<u>Age 55-59 in 1959</u>	<u>Age 65-69 in 1969</u>	<u>Age 65-69 in 1969</u>	<u>Age 75-79 in 1979</u>	
3.08	3.51	2.26	2.26	
<u>Age 50-54 in 1949</u>	<u>Age 60-64 in 1959</u>	<u>Age 60-64 in 1959</u>	<u>Age 70-74 in 1969</u>	<u>Age 80-84 in 1979</u>
1.97	2.98	1.83	2.22	2.13
<u>Age 55-59 in 1949</u>	<u>Age 65-69 in 1959</u>	<u>Age 65-69 in 1959</u>	<u>Age 75-79 in 1969</u>	<u>Age 85+ in 1979</u>
1.78	2.53	1.78	2.03	2.18
	<u>Age 60-64 in 1949</u>	<u>Age 60-64 in 1949</u>	<u>Age 70-74 in 1959</u>	<u>Age 80-84 in 1969</u>
	1.63	0.88	1.60	1.97
	<u>Age 65-69 in 1949</u>	<u>Age 65-69 in 1949</u>	<u>Age 75-79 in 1959</u>	<u>Age 85+ in 1969</u>
	1.33	0.81	1.51	2.03
			<u>Age 70-74 in 1949</u>	<u>Age 80-84 in 1959</u>
			0.72	1.47
			<u>Age 75-79 in 1949</u>	<u>Age 85+ in 1959</u>
			0.85	1.68

The decline in income between workers and nonworkers for a given cohort (compare columns 2 and 3), while sizable, is not as large as the income declines shown in Table 3 for men. This is because the levels of the income-to-needs ratios during working years are lower for women than for men, while retirement incomes are very similar. For example, a working woman age 60-64 in 1969 had an average income-to-needs ratio of 3.84. A woman who was not working had a mean ratio of 2.01. A typical man of the same age who was working in 1969 would have an income-to-needs ratio of 4.47. In retirement, his ratio would be 2.01.

The average income-to-needs ratios for all cohorts of women at all ages increase from decade to decade once work status is held constant (compare column 2 to 1; and, 4 to 3, and 5 to 4). Never-married women who are not working have steadily increasing incomes as they age from 60 through their 80's.

We turn now to changes in income-to-needs ratios associated with widowhood. The analysis of Duncan, Hill, and Rodgers shows that widowhood is an important factor in the income difference between elderly men and women. Burkhauser, Holden, and Myers (1986) support this insight, noting that widowhood is associated with a large decline in income. Using longitudinal data from the Retirement History Study, they suggest that change in marital status is the most important factor affecting the economic status of elderly women. For example, 16.1 percent of women who were widowed in 1971 were poor in their last year of marriage, while 36.1 percent were poor in their first full year as widows. Succeeding cohorts were less poor, but a similar large increase in poverty is evident. Women who were not widowed until 1979 had a

poverty rate of 8.0 percent in their last year of marriage and 25.0 percent in their first full year as widows.

Cross-sectional evidence for the change in economic status associated with widowhood is shown in Table 6--the average income-to-needs ratio of cohorts of wives (i.e., women who live in households headed by married men) and by women who are widowed (and head their own households). Consider a woman and a man who are age 50-54 in 1949, with an income-to-needs ratio of 1.96 (row 3 of the table). In 1959, their ratio has risen to 2.77. If the husband dies that year, the surviving wife can expect to have an income-to-needs ratio of 1.87, which is 68 percent of the previous level. By 1969, her ratio is expected to be 2.06, and by 1979, her expected ratio is 2.39.<sup>6</sup>

The reduction in income associated with widowhood is similar in magnitude to the reduction in income with retirement. However, income growth after widowhood is somewhat slower than income growth after retirement for a man.

## VI. CONCLUSION

Our results support the hypothesis that the economic status of the elderly increased dramatically over the past thirty years. We also confirmed the findings of Duncan, Hill, and Rodgers that if no account is taken of the changing labor force and sex composition of a cohort as it ages, then its mean economic status declines. By controlling for retirement and widowhood, however, we found that successive cohorts of the elderly have higher incomes than preceding ones, and that their economic status continues to increase after retirement.

Table 6

Average Ratio of Household Income to Needs for  
Married Women and Widows, 1949-1979  
(Arranged from Youngest to Oldest Cohorts)

Household Income-to-Needs Ratio When Woman Is Married		Household Income-to-Needs Ratio When Woman Is Widowed		
(1)	(2)	(3)	(4)	(5)
<u>Age 50-54 in 1959</u>	<u>Age 60-64 in 1969</u>	<u>Age 60-64 in 1969</u>	<u>Age 70-74 in 1979</u>	
3.29	3.73	2.35	2.22	
<u>Age 55-59 in 1959</u>	<u>Age 65-69 in 1969</u>	<u>Age 65-69 in 1969</u>	<u>Age 75-79 in 1979</u>	
3.11	3.07	2.11	2.24	
<u>Age 50-54 in 1949</u>	<u>Age 60-64 in 1959</u>	<u>Age 60-64 in 1959</u>	<u>Age 70-74 in 1969</u>	<u>Age 80-84 in 1979</u>
1.96	2.77	1.87	2.06	2.39
<u>Age 55-59 in 1949</u>	<u>Age 65-69 in 1959</u>	<u>Age 65-69 in 1959</u>	<u>Age 75-79 in 1969</u>	<u>Age 85+ in 1979</u>
1.87	2.36	1.75	2.12	2.53
	<u>Age 60-64 in 1949</u>	<u>Age 60-64 in 1949</u>	<u>Age 70-74 in 1959</u>	<u>Age 80-84 in 1969</u>
	1.70	0.93	1.72	2.23
	<u>Age 65-69 in 1949</u>	<u>Age 65-69 in 1949</u>	<u>Age 75-79 in 1959</u>	<u>Age 85+ in 1969</u>
	1.40	0.84	1.77	2.38
			<u>Age 70-74 in 1949</u>	<u>Age 80-84 in 1959</u>
			0.78	1.84
			<u>Age 75-79 in 1949</u>	<u>Age 85+ in 1959</u>
			0.73	2.02

Thus, the reason for the decline in income for the elderly cohort as a whole is that as the cohort ages, its members increasingly are retired men and women or widowed women. These groups have lower income than those who are working or married. Retirement and widowhood do bring large, one-time income declines, but after the event, income generally increases with time. Thus, the relevant social policy concern is with the one-time income declines. If retirement is voluntary, and the individual values both leisure time and income, we expect that economic well-being increases at retirement. If retirement is involuntary, or a woman is widowed, the income decline may be a cause for the public policy concern emphasized by Duncan, Hill, and Rodgers.



## Notes

<sup>1</sup>This paper does not specifically address changes in well-being due to changes in family composition. The growing tendency of the elderly to live by themselves over this period leads to lower measured family income, but presumably increased utility. See Holden (1986) for a discussion.

<sup>2</sup>We are somewhat hesitant about our income estimates for 1950, because the documentation explaining how the sample from the 1950 Census was created has not yet been published. Therefore, we have used sample individuals without weights, even though not all elderly persons are included. See Ross, Danziger, and Smolensky (1985) for a discussion.

<sup>3</sup>We define a household as an income-sharing unit and therefore include only those household members related to the head. Unrelated individuals aged 15 and over and secondary families are counted as separate households. Our definition of household is thus consistent with the Census Bureau's concept of (1) family unit and (2) unrelated individuals.

<sup>4</sup>Poverty lines are defined at the household level and depend on family size, the age and sex of the household head, the number of children under 18 years old, and farm-nonfarm residence. These thresholds incorporate the notions that household needs differ by the characteristics of their members, and that there are economies of scale in family size. The poverty lines are adjusted each year with the Consumer Price Index. For further discussion see Ross, Danziger, and Smolensky (1985).

<sup>5</sup>For example, the random individual has the average characteristics of its cohort in each year. But, women live longer than men and at every age have lower economic status than men. Thus, even if the incomes of all men

and all women remained constant over a decade, the mean income of the random individual would decline because of this differential mortality.

<sup>6</sup>We also analyzed widows who head their own households (about 65 percent of all widows in 1979), and found that this group had lower economic status in each year than that shown for all widows in Table 6. For example, the mean income-to-needs ratios for all widows age 69-73 in 1979 was 2.22; for widows who were household heads, the ratio was 2.08. The sample of all widows includes those who head their own households and those who live in households headed by a relative or nonrelative. Holden (1986) also finds that including women who are not household heads increases the economic status of elderly women.

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APPENDIX TABLE A

Average Ratio of Household Income to Needs in Work  
and Retirement, for Men, by Education Level, 1949-1979  
(Arranged from Youngest to Oldest Cohorts)

	Household Income-to-Needs Ratio When Man Works		Household Income-to-Needs Ratio When Man Is Retired		
	(1)	(2)	(3)	(4)	(5)
	<u>Age 50-54 in 1959</u>	<u>Age 60-64 in 1969</u>	<u>Age 60-64 in 1969</u>	<u>Age 70-74 in 1979</u>	
Ed 1	2.12	2.98	1.40	1.81	
Ed 2	3.00	3.91	1.96	2.32	
Ed 3	3.66	4.85	2.40	3.01	
Ed 4	5.12	7.31	3.81	4.38	
	<u>Age 55-59 in 1959</u>	<u>Age 65-69 in 1969</u>	<u>Age 65-69 in 1969</u>	<u>Age 75-79 in 1979</u>	
Ed 1	2.25	2.65	1.57	1.82	
Ed 2	3.11	3.59	2.12	2.29	
Ed 3	3.83	4.59	2.70	2.88	
Ed 4	5.51	7.28	3.90	4.23	
	<u>Age 50-54 in 1949</u>	<u>Age 60-64 in 1959</u>	<u>Age 60-64 in 1959</u>	<u>Age 70-74 in 1969</u>	<u>Age 80-84 in 1979</u>
Ed 1	1.50	2.36	1.12	1.65	1.94
Ed 2	1.97	3.10	1.52	2.06	2.38
Ed 3	2.57	4.00	2.00	2.67	2.91
Ed 4	3.15	5.43	2.83	3.75	3.86
	<u>Age 55-59 in 1949</u>	<u>Age 65-69 in 1959</u>	<u>Age 65-69 in 1959</u>	<u>Age 75-79 in 1969</u>	<u>Age 85+ in 1979</u>
Ed 1	1.49	2.24	1.38	1.68	2.05
Ed 2	2.00	2.93	1.73	2.01	2.51
Ed 3	2.55	4.01	2.28	2.50	3.04
Ed 4	3.18	5.43	3.09	3.60	3.04
		<u>Age 60-64 in 1949</u>	<u>Age 60-64 in 1949</u>	<u>Age 70-74 in 1959</u>	<u>Age 80-84 in 1969</u>
Ed 1		1.47	0.57	1.33	1.69
Ed 2		1.87	0.84	1.61	2.05
Ed 3		2.49	1.22	2.08	2.39
Ed 4		3.21	1.93	2.67	3.32

Table A, continued

Household Income-to-Needs Ratio When Man Works		Household Income-to-Needs Ratio When Man Is Retired		
(1)	(2)	(3)	(4)	(5)
	<u>Age 65-69 in 1949</u>	<u>Age 65-69 in 1949</u>	<u>Age 75-79 in 1959</u>	<u>Age 85+ in 1969</u>
Ed 1	1.34	0.63	1.26	1.78
Ed 2	1.75	0.83	1.53	2.06
Ed 3	2.48	1.26	2.12	2.32
Ed 4	2.95	1.62	2.57	3.18
			<u>Age 70-74 in 1949</u>	<u>Age 80-84 in 1959</u>
Ed 1			0.61	1.33
Ed 2			0.77	1.73
Ed 3			0.98	2.00
Ed 4			1.43	2.75
			<u>Age 75-79 in 1949</u>	<u>Age 85+ in 1959</u>
Ed 1			0.62	1.37
Ed 2			0.85	1.93
Ed 3			1.03	2.23
Ed 4			1.34	2.65

Note: Education levels are defined as follows: Ed 1: less than 8 years of schooling; Ed 2: 8-11 years of schooling; Ed 3: 12 years of schooling; Ed 4: more than 12 years of schooling.