

Changes in the Incomes of Age Groups, 1984-89

by Daniel B. Radner*

This article examines changes in the before-tax cash income of the aged and of other age groups from 1984 to 1989. Earlier research found that the real income of the aged rose substantially, both absolutely and relative to the income of the nonaged, from about 1970 to the mid-1980's. The 1984-89 period, however, was quite different from that earlier period. It is shown here that from 1984 to 1989 the real income of the aged rose slowly, and fell slightly relative to the income of the nonaged. The rates of income growth for detailed age groups are explored, with the emphasis on differences between the aged and nonaged. The increase in the real mean total income of the aged during the 1984-89 period was the net result of substantial increases in earnings and pension income and a substantial decrease in property income. The composition of the income of the aged shifted slightly away from property income and Social Security benefits, and toward earnings and pensions. The increases in income for aged units were higher for high-income units than for low-income units, producing an increase in inequality. The percentage of aged persons who were poor fell slightly from 1984 to 1989, but that percentage remained above the rates for other adult age groups. This article also serves as an update of an earlier article that examined the 1967-84 period.

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In recent years there has been great interest in the economic status of the aged, especially in connection with the debates about the appropriate level of Social Security benefits and Medicare coverage and financing. The economic status of the aged relative to other age groups has been of particular interest in these debates. This article examines changes in the before-tax cash income of the aged and of other age groups from 1984 to 1989. Earlier research found that the real income of the aged rose substantially, both absolutely and relative to the income of the nonaged, from about 1970 to the mid-1980's (Radner 1986, 1987a, 1987b). It is shown here that from 1984 to 1989 the real income of the aged rose slowly, and fell slightly relative to the income of the nonaged. The different rates of income growth for different age groups are explored in this article, with the emphasis on differences between the aged and nonaged. This article also serves as an update of an earlier study that contained estimates for the 1967-84 period (Radner 1987a). The estimates in this article generally are consistent with those presented in the earlier study.

The aged are not a homogeneous group, as noted by many analysts. For example, the "young old" have a higher average income than the "old old" do, and aged married

couples have a higher average income than aged widows do. Within each of the subgroups of the aged there is also a wide range of incomes. In this article, detailed age groups within the aged group are emphasized. Subgroups of the aged based on type of family unit and sex of unit head, and based on race and Hispanic origin are also examined. The nonaged, of course, are also not a homogeneous group. Detailed age groups within the nonaged group are shown. Summary estimates for the aged and nonaged are also presented, but the wide diversity present in both groups should be kept in mind when those estimates are examined.

Where possible, medians, rather than means, are used in this article. Medians generally are more representative of the typical unit in a group than means are because means are affected by extreme values. In many cases, comparisons made using medians differ substantially from those made using means. In general, the aged are less well off relative to the nonaged when medians are used because the distribution of income is more highly skewed for the aged than for the nonaged. When inequality and the composition of total income are examined, means are used because medians are not appropriate.

Findings

Important changes in the real income of the aged from 1984 to 1989 include:

- The ratio of aged to nonaged median incomes fell slightly each year from 1984 to 1988; the 1989 ratio was unchanged from the 1988 value.
- The rate of growth in the median income of the aged was substantially lower than in the 1967-84 period.
- Inequality in the income of the aged rose.
- Poverty rates for aged persons fell slightly.
- The increase in mean total income of the aged was the net result of substantial increases in earnings and pensions and a substantial decrease in property income.
- The composition of total income of the aged shifted slightly toward earnings and pensions and away from property income and Social Security benefits.
- The median incomes of socioeconomic subgroups of the aged generally changed only slightly relative to the median income for all units.

Data and Definitions

The data are from the Current Population Survey (CPS) conducted by the Bureau of the Census. Most of the estimates shown are from the March 1990 and March 1985 CPS microdata files, but microdata files from several other years and some published estimates are also used. Income is defined as cash income before taxes, the definition ordinarily used in the CPS. Although some analysts have used broader definitions of income (for example, including noncash income), estimates for most broader definitions are controversial and are not available for a long time span.

In some of the estimates in this article, total income is separated into five major income types: Earnings (wages and salaries, self-employment income); Social Security benefits (including Railroad Retirement benefits); property income (interest, dividends, rent, royalties, estate and trust income); pensions (government and private pensions, annuities); and other income (for example, Supplemental Security Income, public assistance, unemployment and workers' compensation).

The income recipient units used are "family units." A family unit is either a family (two or more related persons living together) or an unrelated individual (a person who lives with no relatives).¹ Families are classified according to the age of the unit head. Aged family units are those whose head is age 65 or older.

In most of the estimates shown in this article, income amounts were adjusted for differential needs associated with size of family unit and age of head using the equivalence scale implicit in the poverty thresholds. Although no fully satisfactory adjustment for

differential needs is available, that scale is not an extreme one and is used widely.² For the estimates presented in this article, the use of this equivalence scale is preferable to the use of no adjustment.

The income of each family unit was divided by the appropriate equivalence scale value to obtain adjusted income. The value for a one-person unit (all ages) was used as the base for the scale; the adjusted amounts can be interpreted as income per equivalent adult. The scale values used were: one person (under age 65), 1.023; one person (age 65 or older), 0.943; two persons (under age 65), 1.322; two persons (age 65 or older), 1.189; three persons, 1.567; four persons, 2.010; five persons, 2.377; six persons, 2.684; seven persons, 3.055; eight persons, 3.377; and nine persons or more, 3.999.³

It is important to note that aged one-person units (unrelated individuals) are assumed to need about 8 percent less income than nonaged unrelated individuals and aged two-person families are assumed to need about 10 percent less income than nonaged two-person families. These aged-nonaged differentials are controversial and their use makes the adjusted income of the aged relatively higher than it would be if no aged-nonaged differentials were used.

Underreporting of income amounts has been found to be an important problem in the CPS (Radner 1982). In 1987, total income estimated from the CPS was 11 percent below independent control aggregates, but the shortfall was far greater for some income types, such as property income (Bureau of the Census 1991b). Underreporting of total income is thought to be higher for older age groups than for younger ones. Thus, aged-nonaged

income ratios would rise somewhat if adjustments for underreporting were made (Radner 1986). The estimates in this article are not adjusted for underreporting.

A change in CPS processing implemented by the Bureau of the Census beginning with income data for 1988 affected estimates of change somewhat. The new system increased aggregate total income by almost 1 percent (Bureau of the Census 1990a). The median total income of aged households was increased by 0.8 percent, while the median total income of nonaged households was increased by 0.3 percent. Increases for some income types were substantially larger than the increase for total income. For example, in terms of aggregate amounts, property income rose about 4 percent, and pensions and self-employment income each rose about 3 percent. Comparisons between 1984 and 1989 should be interpreted with the effects of this processing change in mind.

Constant dollar estimates (in 1982 dollars) are used to compare income estimates for different years. The personal consumption expenditure (PCE) implicit price deflator from the National Income and Product Accounts was used to compute these constant dollar estimates.⁴ The same price deflator was used for both aged and nonaged units.⁵

Historical Perspective

It is important to put the income changes from 1984 to 1989 into historical context. The relationship between the mean income of the aged and the mean incomes of other age groups from 1947 to 1989 has been characterized by a relative decline for the aged followed by a relative improvement. The most

recent time period showed a small relative decline for the aged. Table 1 shows the ratios of the mean income of aged family units to the mean incomes of other age groups for selected years. These estimates, which are derived from published estimates, are not adjusted for differential needs; the levels of these ratios would be higher if such an adjustment had been made.⁶ Changes in these ratios, however, are affected only slightly by the lack of that adjustment.

From 1947 to 1967, the aged-nonaged ratio fell from 0.67 to 0.50.⁷ The mean income for aged units fell relative to the mean for every other age group.

From 1967 to 1979, the aged-nonaged ratio rose from 0.50 to 0.54. The mean for aged units, however, fell or changed little relative to the means for the groups aged 35-64.

From 1979 to 1984, the aged-nonaged ratio rose from 0.54 to 0.65, a dramatic rise in so short a period. The mean for aged units rose sharply relative to the mean for every other age group.

From 1984 to 1989, the aged-nonaged ratio fell slightly from 0.65 to 0.63. The mean for aged units fell relative to the mean for the group aged 45-54, rose relative to the mean for the under age 25 group, and changed little relative to the means for the other age groups.

Thus in the 1947-67 and 1979-84 periods the aged showed strong shifts relative to all other age groups, while the changes in the 1967-79 and 1984-89 periods were mixed with respect to the different nonaged groups.

The 1989 aged-nonaged ratio was slightly below the 1947 ratio.⁸ The ratios of the mean for aged units to the means for the groups aged

Table 1.—Ratio of mean income of aged family units to mean incomes of nonaged family units, selected years 1947-89

Age of unit head	1947	1967	1979	1984	1989
Under 65.....	0.67	0.50	0.54	0.65	0.63
Under 25.....	1.11	.88	1.03	1.45	1.51
25-34.....	.73	.53	.60	.75	.76
35-44.....	.61	.45	.46	.56	.55
45-54.....	.60	.43	.43	.51	.48
55-64.....	.67	.54	.51	.60	.59

Source: Derived from published estimates in various **Current Population Reports**, Series P-60.

35-64 were lower in 1989 than in 1947. The ratio of the mean for aged units to the mean for the group aged 25-34 was slightly higher in 1989 than in 1947 and the ratio of the mean for aged units to the mean for the under age 25 group was substantially higher in 1989 than in 1947.

The 1984-89 Period

The estimates shown in the remainder of this article have been adjusted for size of family unit and age of head and were obtained from microdata files. Also, medians, rather than means, are used in most cases. Aged-nonaged ratios based on medians generally are lower than those ratios based on means. Comparable estimates are available as far back as 1967. A few estimates for 1967 and several other years and for the 1967-84 period are shown for purposes of comparison.

Economic Conditions

Comparisons between the aged and the nonaged are affected by overall economic conditions. In general, the real income of the aged is less sensitive to current conditions and more sensitive to

past factors than is the income of the nonaged. Past earnings and past saving have a strong influence on the current income of the aged. Current labor market activity, on the other hand, has the strongest influence on the income of the nonaged. It should be noted, however, that current labor market conditions and the current level of interest rates also have some impact on the income of the aged.

The period from 1984 to 1989 was a time of substantial economic growth following the severe recession of 1981-82. In contrast, the period from about 1970 to the mid-1980's contained two severe recessions and generally was a period of weaker economic performance. Real gross national product rose 3.3 percent per year from 1984 to 1989. The increase was highest for 1988 (4.5 percent) and lowest for 1989 (2.5 percent).⁹ Interest rates generally fell, then rose. For example, the average 6-month Treasury bill rate fell from 9.8 percent in 1984 to 6.0 percent in 1986 and 1987, then rose to 8.0 percent in 1989. The overall unemployment rate fell steadily from 7.4 percent in 1984 to 5.2 percent in 1989. Thus, interest rates and unemployment were lower in 1989 than in 1984. The inflation rate generally fell, then rose. The PCE implicit price deflator rose 3.8

percent for 1984, rose 2.4 percent for 1986, then rose 4.6 percent for 1989. Thus, the inflation rate was slightly higher for 1989 than for 1984 (Council of Economic Advisers 1991).

Aged and Nonaged Median Incomes

The ratio of aged to nonaged median incomes adjusted for size of family unit and age fell slightly each year from 1984 to 1988, from 0.727 in 1984 to 0.693 in 1988 (table 2).¹⁰ The 1989 ratio was unchanged from the 1988 value. The 1989 ratio was slightly below the 1982 value. The decline of 4.7 percent in the ratio from 1984 to 1989 was in contrast to the rapid 20.4 percent rise in the ratio from 1979 to 1984. The 1967 to 1984 period showed a 38.2 percent rise in the ratio. Before 1984-89, the most recent decline in the aged-nonaged ratio for a period of at least 4 years appears to have been in 1964-70. Based on estimates of mean income unadjusted for differential needs, the aged-nonaged ratio fell in 5 of the 6 years in that period, with only a very small rise in 1968. The decline in the ratio of means was from 0.55 in 1964 to 0.49 in 1970.

Changes in aged-nonaged income ratios do not provide information about the levels of rates of change in median income for the aged and nonaged, but only about differences between those rates. An unchanged ratio, for example, could result from rising, falling, or unchanged median incomes for the aged and nonaged. Annual rates of growth in real median income for the 1967-89 period are shown for aged and nonaged family units in table 3. For the 1984-89 period, both groups showed increases in real median income. Growth in the income of the aged (0.6 percent per year), however, was substantially below

Table 2.—Ratio of aged to nonaged median incomes of family units¹

Year	Ratio	Change from previous year
1967	.526	...
1972	.572	...
1977	.603	...
1979	.604	...
1980	.631	+ .027
1981	.668	+ .037
1982	.699	+ .031
1983	.710	+ .011
1984	.727	+ .017
1985	.712	-.015
1986	.706	-.006
1987	.697	-.009
1988	.693	-.004
1989	.693	0

¹ Income adjusted for size of family unit and age of head.

Source: Tabulations from March CPS files.

growth in the income of the nonaged (1.6 percent per year).

Annual income growth for the aged was markedly lower in 1984-89 than in any of the other periods shown. Annual income growth for the nonaged in 1984-89 was higher than in two of the other three periods shown. For the entire 1967-89 period, the growth rate of the income of the aged was much higher than that of the nonaged (2.6 percent per year, compared with 1.3 percent per year).

For the first three of the four subperiods shown, growth in the income of the aged exceeded that of the nonaged. The difference in growth rates was particularly striking in the 1979-84 period, in which the income of the aged rose by 3.4 percent per year while the income of the nonaged fell by 0.3 percent per year. Thus, the rapid increase in the income of the aged relative to the income of the nonaged in 1979-84 resulted from both a decline in the income of the nonaged (associated with the effects of two

Table 3.—Average annual percentage change in real median incomes of family units, by age of unit head, 1967-89¹

Period	Age 65 or older	Under age 65
1967-89	2.6	1.3
1967-72	4.9	3.1
1972-79	1.9	1.1
1979-84	3.4	-.3
1984-89	.6	1.6

¹ Income adjusted for size of family unit and age of head.

Source: Tabulations from March CPS files.

recessions) and a large rise in the income of the aged.

Median Incomes of Detailed Age Groups

For all ages, real median income in constant 1982 dollars (adjusted for size of family unit and age of head) rose from \$13,330 in 1984 to \$14,303 in 1989, an increase of 1.4 percent per year (table 4). As noted above, for aged units the rise was only 0.6 percent per year (from \$10,271 to \$10,598), while for nonaged units the rise was 1.6 percent per year (from \$14,116 to \$15,303).

Looking only at summary aged and nonaged groups hides many interesting and important differences. There were substantial differences in income growth within both groups. Within the aged group, rates of income growth ranged from 0.4 percent per year (age 75-79) to 1.7 percent per year (age 70-74). Rates of growth were higher for the groups aged 65-74 than for the groups aged 75 or older.¹¹ Within the nonaged group, increases ranged from 0.6 percent per year (age 25-29) to 2.5 percent per year (age 50-54).

In addition to the group aged 50-54, which had the highest rate of growth of any group, the groups

aged 40-49 and 60-64 also had relatively high rates of growth—at least 2.2 percent per year. The group aged 75-79 had the lowest rate of increase of any age group, 0.4 percent per year, and the two oldest groups also had relatively low rates of increase—less than 1.0 percent per year.¹² In contrast, for the 1967-84 and 1979-84 periods, each detailed aged group had a higher rate of growth in median income than each nonaged group (Radner 1987a).

Relative medians (all ages = 1.00) are shown for detailed age groups for 1984 and 1989 in table 5. These relative medians are derived from the medians shown in table 4 by dividing the median for the age group by the median for all ages. In both years, relative medians were low at young and old ages and reached a peak in the group aged 50-54 (chart 1). The oldest group had the lowest relative median of any group in both years.

Changes in relative medians are closely related to the rates of income growth shown in table 4. The relative median for the group aged 65 or older fell from 0.77 in 1984 to 0.74 in 1989. Almost all the detailed aged groups experienced declines in their relative medians, although only the groups aged 75-79 and 85 or older showed sizable declines. The group aged 70-74 showed a small rise. The groups under age 40 also had declines and the groups aged 40-54 and 60-64 experienced increases.

From 1967 to 1984, in contrast, the relative median for each detailed aged group rose sharply. The median of each detailed aged group rose relative to the median for each detailed nonaged group from 1967 to 1984.

Table 4.—Real median family unit income, by age of unit head, and average annual percentage change in real median income, 1984-89¹
[In 1982 dollars]

Age of unit head	1984	1989	Average annual percentage change
All ages.....	\$13,330	\$14,303	1.4
Under 65.....	14,116	15,303	1.6
65 or older.....	10,271	10,598	.6
20-24.....	8,505	9,030	1.2
25-29.....	13,067	13,443	.6
30-34.....	13,867	14,554	1.0
35-39.....	15,101	15,667	.7
40-44.....	15,738	17,519	2.2
45-49.....	17,356	19,475	2.3
50-54.....	17,622	19,980	2.5
55-59.....	16,803	17,965	1.3
60-64.....	14,097	15,761	2.3
65-69.....	12,509	13,241	1.1
70-74.....	10,574	11,497	1.7
75-79.....	9,143	9,306	.4
80-84.....	7,868	8,245	.9
85 or older.....	7,458	7,651	.5

¹ Income adjusted for size of family unit and age of head.

Source: Tabulations from the March 1985 and March 1990 CPS files.

Inequality

In addition to changes in median or mean income, changes in the distribution of income are also important. One way of examining the distribution is through the use of income shares of income quintiles. For aged units, the income share of the bottom income quintile fell from 5.6 percent in 1984 to 5.4 percent in 1989 (table 6).¹³ In contrast, the share of the top quintile rose from 48.1 percent to 48.9 percent and the share of the top 5 percent of the distribution rose from 20.5 percent to 21.1 percent for aged units. These changes continued in the same direction as in the 1979-84 period.

Inequality, as measured by the Gini concentration ratio, rose from 0.416 to 0.426 for aged units.¹⁴ The

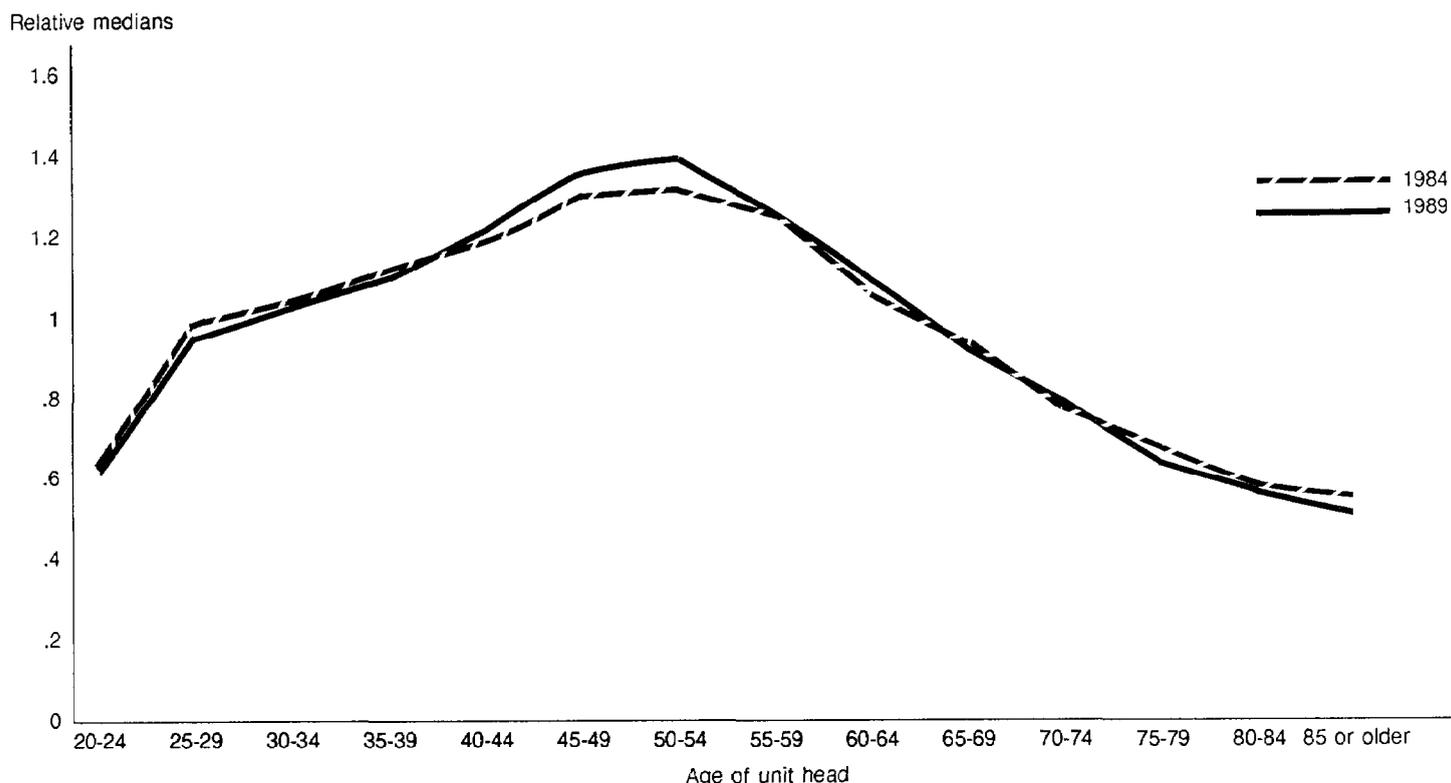
Table 5.—Relative median incomes of family units, by age of unit head, 1984 and 1989¹

Age of unit head	1984	1989
All ages.....	1.00	1.00
Under 65.....	1.06	1.07
65 or older.....	.77	.74
20-24.....	.64	.63
25-29.....	.98	.94
30-34.....	1.04	1.02
35-39.....	1.13	1.10
40-44.....	1.18	1.22
45-49.....	1.30	1.36
50-54.....	1.32	1.40
55-59.....	1.26	1.26
60-64.....	1.06	1.10
65-69.....	.94	.93
70-74.....	.79	.80
75-79.....	.69	.65
80-84.....	.59	.58
85 or older.....	.56	.53

¹ Income adjusted for size of family unit and age of head.

Source: Tabulations from the March 1985 and March 1990 CPS files.

Chart 1.—Relative median incomes for age groups



Source: Tabulations from the March 1985 and March 1990 CPS files.

Lorenz curve shifted outward, with no intersection; thus, there was an unambiguous increase in inequality. This increase continued an increase from 1979 to 1984.

For nonaged units, the share of the bottom quintile rose slightly from 3.9 percent to 4.0 percent and the share of the top quintile rose from 44.1 percent to 44.4 percent from 1984 to 1989. The share of the bottom quintile had fallen sharply and the share of the top quintile had risen sharply from 1979 to 1984.

The Gini ratio for nonaged units rose slightly from 0.397 in 1984 to 0.399 in 1989. The Lorenz curves for the 2 years, however, did intersect; therefore, there was no unambiguous change in inequality. There had been a substantial rise in the Gini ratio from 1979 to 1984.

For both 1984 and 1989, the Gini ratio for aged units was higher than the Gini ratio for nonaged units, but the aged and nonaged Lorenz curves intersected. Therefore, inequality among aged units was not unambiguously higher than inequality among nonaged units.

Rates of income growth for income quintiles are closely related to changes in income shares and in inequality. The real mean income of aged units rose 1.1 percent per year from 1984 to 1989 (table 7).¹⁵ The various income quintiles of aged units, however, showed quite different rates of income growth, although no quintile had a high rate of growth. For aged units, the rate of increase ranged from 0.1 percent per year for the bottom income

quintile to 1.5 percent per year for the top quintile and 1.7 percent per year for the top 5 percent of the distribution.¹⁶ This pattern of higher rates of increase at higher income levels was roughly similar to the pattern for 1979-84, although the earlier period had higher rates of growth.

The real mean income of nonaged units rose 1.7 percent per year. The increases by income quintile ranged only from 1.6 percent per year for the second, third, and fourth quintiles to 2.0 percent per year for the bottom quintile. This pattern is very different from the pattern for the 1979-84 period, in which the bottom three quintiles showed declines in income

Table 6.—Relative income shares of quintiles of family units, by age of unit head, 1984 and 1989 ¹

Income quintile	All ages		Age 65 or older		Under age 65	
	1984	1989	1984	1989	1984	1989
Total	100.0	100.0	100.0	100.0	100.0	100.0
1	4.2	4.2	5.6	5.4	3.9	4.0
2	10.3	10.1	9.5	9.4	10.7	10.6
3	16.4	16.2	14.5	14.3	16.8	16.7
4	24.1	24.0	22.2	22.0	24.4	24.2
5	45.1	45.5	48.1	48.9	44.1	44.4
Top 5 percent..	17.4	17.6	20.5	21.1	16.7	16.8
Gini ratio.....	.404	.408	.416	.426	.397	.399

¹ Income adjusted for size of family unit and age of head.
Source: Tabulations from the March 1985 and March 1990 CPS files.

Table 7.—Average annual percentage change in real mean incomes of quintiles of family units, by age of unit head, 1984-89 ¹

Income quintile	All ages	Age 65 or older	Under age 65
Total	1.6	1.1	1.7
1	1.5	.1	2.0
2	1.4	.8	1.6
3	1.4	.8	1.6
4	1.5	.9	1.6
5	1.8	1.5	1.9
Top 5 percent.....	1.9	1.7	1.9

¹ Income adjusted for size of family unit and age of head.
Source: Tabulations from the March 1985 and March 1990 CPS files.

while the top quintile showed substantial growth.

Poverty

Another aspect of the distribution of income is the poverty rate. Poverty rates for 1984 and 1989, based on the official definition of poverty, are shown for detailed age of person groups in table 8. ¹⁷ In both years, the rates were relatively high at young and old ages. The rate for aged persons was above the rate for each age group in the

30-64 age range, but below the rate for children, in both years. The poverty rate for all aged persons was below the rate for all nonaged persons in both years.

Insert table 8

There was a wide range of poverty rates among detailed aged groups in both years. Within the aged group, in each year the rates rose as age increased. In 1989, the rates ranged from 8.2 percent for the group aged 65-69 to 18.4 percent for the group aged 85 or older.

From 1984 to 1989, poverty rates generally fell slightly. For all persons, the poverty rate fell from 14.4 percent to 12.8 percent; for aged persons, from 12.4 percent to 11.4 percent; and for nonaged persons, from 14.7 percent to 13.0 percent. The decline for nonaged persons was larger than the decline for aged persons, both in percentage point terms and as a percentage of the rate. The rate fell for each detailed age group except the group aged 85 or older, in which there was no change. The decline for the aged continued a general trend. The decline for the nonaged reversed the rise from 1979 to 1984.

There is controversy about the appropriate level for the poverty thresholds (for example, Ruggles 1990). The current level of the thresholds reflects both the initial level chosen and the method chosen for updating that level over time. Even if the official threshold levels that were specified initially are accepted, those thresholds have been indexed for price change but not for changes in the standard of living. If the official thresholds had been indexed to reflect increases in average income, the thresholds would be at a higher level now. Because of this uncertainty about the appropriate level for the thresholds, percentages below thresholds that are somewhat higher than the official thresholds sometimes are examined.

The percentage of each age group with income below 150 percent of the poverty threshold is shown in table 8. A comparison of the percentages below the official threshold and below 150 percent of that threshold in a given year is informative. In both years, the percentage below 150 percent of the threshold was more than double the percentage below the official threshold for each aged group; no

Table 8.—Percentage of persons poor or near poor, by age of person, 1984 and 1989

Age	1984		1989	
	Below poverty threshold	Below 150% of poverty threshold	Below poverty threshold	Below 150% of poverty threshold
All ages.....	14.4	24.3	12.8	22.0
Under 65.....	14.7	23.7	13.0	21.2
65 or older.....	12.4	29.1	11.4	27.2
Under 5.....	23.9	36.2	22.6	33.9
5-9.....	22.6	33.9	20.3	31.2
10-14.....	20.1	31.0	18.1	28.2
15-19.....	18.0	27.4	15.6	25.0
20-24.....	16.0	27.3	14.8	24.7
25-29.....	12.5	21.2	11.3	20.0
30-34.....	11.4	19.4	10.8	18.4
35-39.....	10.0	17.1	8.9	15.2
40-44.....	9.6	16.3	7.2	13.1
45-49.....	9.4	15.3	7.2	12.2
50-54.....	9.4	15.4	7.7	13.0
55-59.....	9.9	17.3	9.7	16.2
60-64.....	10.9	19.9	9.5	17.4
65-69.....	9.4	21.7	8.2	20.2
70-74.....	11.5	27.9	9.6	24.7
75-79.....	13.7	32.9	13.5	32.7
80-84.....	17.7	40.4	16.7	36.8
85 or older.....	18.4	40.3	18.4	38.6

Source: Tabulations from the March 1985 and March 1990 CPS files.

other age group doubled its percentage in either year. Thus, relatively higher percentages of aged persons than nonaged persons were not far above the official threshold.

As in the case of poverty rates, percentages below 150 percent of the threshold were relatively high for old and young persons. In both years, the percentage of each aged group below 150 percent of the threshold was higher than the percentage for each age group in the 25-64 age range. The two oldest groups had the highest percentages below 150 percent of the threshold of any group in both years (for the group aged 85 or older, 38.6 percent in 1989 and 40.3 percent in 1984). In both years, the percentage of aged persons below 150 percent of the threshold was substantially higher than the percentage of

nonaged persons below 150 percent of the threshold.

Percentages below 150 percent of the threshold fell slightly from 1984 to 1989. In 1989, 27.2 percent of aged persons were below 150 percent of the threshold. That percentage fell from 29.1 percent in 1984. For nonaged persons, the percentage fell from 23.7 percent in 1984 to 21.2 percent in 1989. The percentage for each aged group fell from 1984 to 1989.

Changes in Income Types

The discussion in the next two sections is in terms of means, rather than medians. This shift to means is made because the relationship between changes in amounts of total income and changes in amounts of income types (and the

composition of total income discussed in the next section) cannot be analyzed in a straightforward manner using medians.¹⁸ In addition to entire age groups, income quintiles of aged units are also examined so that income change and composition at different income levels can be analyzed.

Changes from 1984 to 1989 in constant dollar means of income types are shown by age of head in table 9. For the aged group as a whole, mean total income rose \$806 (5.7 percent). Mean earnings (for all units in the group, not just for those with earnings) rose \$532 (19.1 percent), pensions rose \$437 (22.7 percent), and Social Security benefits and other income each rose by less than \$100. In contrast, mean property income fell by \$275 (7.0 percent).^{19,20} The mean of total income excluding property income rose by \$1,081 (10.5 percent) for the aged. The rise in mean pension income resulted in part from an increase from 39 percent to 44 percent in the percentage of aged units receiving pension income. The other income types showed changes of less than one percentage point in the percentage receiving the type.

The changes in mean amounts in the 1984-89 period differed greatly from those that occurred in 1979-84. In the 1979-84 period, in which mean total income of the aged rose by \$2,350 (19.9 percent), property income rose by \$1,420 (57.5 percent), Social Security benefits rose by \$650 (14.3 percent), and pensions rose by \$390 (25.3 percent), while earnings fell slightly.²¹ Mean total income excluding property income rose \$920 (9.9 percent) from 1979 to 1984, slightly less than the increase from 1984 to 1989. (For the 1967-79 period, earnings fell and Social

Security benefits, property income, and pensions plus other income rose substantially.)

Several income types had different effects on changes in the mean total income of the aged in the 1984-89 and 1979-84 periods. The increase in mean total income of the aged in 1984-89 was held down relative to the increase in 1979-84 by the changes in property income and Social Security benefits. After rising by \$1,420 in the earlier period, mean property income fell \$275 in 1984-89. Mean Social Security benefits rose \$650 in the earlier period, but rose only \$84 during 1984-89. The change in mean earnings, on the other hand, was a positive factor in the rise in total income in the later period. Mean earnings fell \$80 in the earlier period and rose \$532 in 1984-89. Although mean pension income rose \$437 in 1984-89, that figure was only slightly higher than the \$390 rise in the earlier period. Pension income was the only income type that was a substantial positive factor in the growth in mean total income of the aged in both periods.

Mean Social Security benefits of aged units rose 14 percent in the 1979-84 period, but the rise was only 2 percent in the 1984-89 period. Differences in the effects of price indexing of existing Social Security benefit amounts accounted for much of that difference. During 1984-89, automatic cost-of-living increases in Social Security benefits (which are based on changes in the Consumer Price Index for Urban Wage and Clerical Workers (CPI-W)) amounted to 17 percent, but the PCE implicit price deflator rose 20 percent. Thus, when the PCE implicit price deflator was used to deflate income, the automatic

adjustments produced a decrease in real benefits of almost 3 percent. For 1979-84, automatic cost-of-living increases amounted to 48 percent, while the PCE deflator rose 38 percent, producing a real increase of about 7 percent. These real changes produced by automatic adjustments resulted from different rates of change of the CPI-W compared with the PCE deflator and the lagged nature of the automatic adjustments. Also, in the 1979-84 period, legislation postponed the scheduled midyear 1983 automatic increase 6 months to the end of 1983.²²

From 1984 to 1989, for the group aged 65-74 mean earnings and pensions rose substantially, but mean property income fell. The percentage of that age group receiving pension income rose from 43 percent to 48 percent, and the percentage receiving earnings rose from 38 percent to 40 percent. For the group aged 75 or older, mean Social Security benefits, pensions, and earnings rose, while mean property income fell. The percentage of that age group receiving pension income rose from 32 percent to 37 percent.

Changes in total income were dominated by changes in earnings for the groups under age 55. In those groups, earnings was the only income type that had a change as large as \$100 in mean income. The group aged 55-64, however, showed substantial increases in earnings and pension income, and other income also rose. In that group, the percentage receiving pension income rose from 24 percent to 28 percent.

Changes in income types for aged units are shown for income quintiles in table 10. The third

income quintile is sometimes used to represent "typical" units in the distribution. The third quintile of aged units showed an increase in mean total income of \$411 (4.0 percent). For that quintile, pensions rose \$275 (20.0 percent) and Social Security benefits rose \$116 (2.0 percent). The other three income types showed small dollar amount changes; mean property income fell by only \$6 and earnings rose by only \$55 (4.8 percent). The percentage receiving pension income rose from 48 percent in 1984 to 53 percent in 1989. From 1979 to 1984, for the third quintile, mean Social Security benefits rose \$630, property income rose \$410, pensions rose \$370, and earnings rose \$180. For the third quintile, the changes in Social Security benefits, property income, and, to a lesser extent, earnings in the 1984-89 period held down the rise in total income relative to the rise in the 1979-84 period.

The top quintile of aged units showed an increase in total income of \$2,549 (7.5 percent) from 1984 to 1989. For that quintile, mean earnings rose \$2,291 (24.2 percent) and pensions rose \$1,296 (26.0 percent). Property income, however, fell by \$1,121 (8.4 percent). The percentage receiving earnings rose from 52 percent to 57 percent, and the percentage receiving pension income rose from 56 percent to 62 percent. From 1979 to 1984, the top quintile showed a rise of \$6,260 in total income. Property income rose \$5,240, Social Security benefits rose \$1,090, pensions rose \$870, and earnings fell \$930. For the top quintile, the change in property income had a strong negative effect on change in total income in the 1984-89 period relative to the 1979-84 period, while the change in earnings had a strong positive effect.

Table 9.—Mean incomes of family units and change in income, in 1982

Age of unit head	Mean income											
	Total		Earnings		Social Security		Property		Pension		Other	
	1984	1989	1984	1989	1984	1989	1984	1989	1984	1989	1984	1989
All ages.....	\$16,321	\$17,687	\$12,329	\$13,561	\$1,261	\$1,291	\$1,518	\$1,463	\$676	\$816	\$537	\$555
Under 65.....	16,854	18,374	14,711	16,170	289	286	923	912	364	422	567	585
65 or older.....	14,185	14,991	2,785	3,317	5,157	5,241	3,903	3,628	1,927	2,364	414	440
Under 25.....	9,281	9,673	8,282	8,689	35	41	182	153	13	21	770	770
25-34.....	15,392	16,209	14,405	15,236	56	67	341	324	61	51	529	531
35-44.....	17,742	19,113	16,360	17,666	133	139	650	687	89	109	510	513
45-54.....	20,045	22,796	17,621	20,271	275	254	1,156	1,247	393	418	600	607
55-64.....	19,251	20,927	13,791	14,887	1,044	1,107	2,449	2,405	1,405	1,859	562	669
65-74.....	15,569	16,823	3,805	4,667	5,170	5,120	3,893	3,672	2,266	2,876	435	478
75 or older.....	12,133	12,459	1,273	1,439	5,137	5,408	3,916	3,567	1,424	1,658	382	386

¹ Income adjusted for size of family unit and age of head.
Source: Tabulations from the March 1985 and March 1990 CPS files.

Table 10.—Mean incomes of aged family units and change in income,

Income quintile	Mean income											
	Total		Earnings		Social Security		Property		Pension		Other	
	1984	1989	1984	1989	1984	1989	1984	1989	1984	1989	1984	1989
1.....	\$3,990	\$4,020	\$73	\$84	\$3,105	\$3,201	\$169	\$166	\$77	\$130	\$566	\$438
2.....	6,771	7,046	348	428	4,979	5,093	591	619	448	502	405	403
3.....	10,306	10,717	1,146	1,201	5,829	5,945	1,606	1,600	1,377	1,652	349	319
4.....	15,730	16,488	2,887	3,112	5,959	6,134	3,833	3,563	2,739	3,247	311	433
5.....	34,127	36,676	9,470	11,761	5,912	5,829	13,313	12,192	4,993	6,289	438	606
Top 5 percent.....	58,198	63,174	17,777	22,603	5,746	5,637	26,899	25,419	6,749	8,591	1,027	924

¹ Income adjusted for size of family unit and age of head.
Source: Tabulations from the March 1985 and March 1990 CPS files.

Composition of Income

Different rates of growth for income types result in changes in the composition of total income. The composition of total income for age groups in 1984 and 1989 is shown in table 11. The groups under age 55 showed little change from 1984 to 1989. For each of those age groups, earnings constituted more than 87 percent of total income in both years. For the group aged

55-64, there was a slight shift from property income to pensions. Earnings constituted about 71 percent of total income for that age group.

For the aged group, the share of earnings rose from 19.6 percent to 22.1 percent. This increase reversed a trend since 1967 (Radner 1987a). The share of pensions rose from 13.6 percent to 15.8 percent. The share of pensions plus other income

generally has been rising since 1967. The share of Social Security benefits fell from 36.4 percent to 35.0 percent, continuing the fall from 1979 to 1984. The share of property income fell from 27.5 percent to 24.2 percent, reversing a trend since 1967. The groups aged 65-74 and 75 or older both showed decreased shares for property income and increased shares for pensions and earnings.

dollars, by type of income and age of unit head, 1984 and 1989¹

Income change, 1984-89												Age of unit head
Total		Earnings		Social Security		Property		Pension		Other		
Dollar	Percent	Dollar	Percent	Dollar	Percent	Dollar	Percent	Dollar	Percent	Dollar	Percent	
\$1,366	8.4	\$1,232	10.0	\$30	2.4	-\$55	-3.6	\$140	20.7	\$18	3.4	.....All ages
1,520	9.0	1,459	9.9	-3	-1.0	-11	-1.2	58	15.9	18	3.2	.....Under 65
806	5.7	532	19.1	84	1.6	-275	-7.0	437	22.7	26	6.3	.....65 or older
392	4.2	407	4.9	6	17.1	-29	-15.9	8	61.5	0	0	.....Under 25
817	5.3	831	5.8	11	19.6	-17	-5.0	-10	-16.4	2	.4	.....25-34
1,371	7.7	1,306	8.0	6	4.5	37	5.7	20	22.5	3	.6	.....35-44
2,751	13.7	2,650	15.0	-21	-7.6	91	7.9	25	6.4	7	1.2	.....45-54
1,676	8.7	1,096	7.9	63	6.0	-44	-1.8	454	32.3	107	19.0	.....55-64
1,254	8.1	872	22.9	-50	-1.0	-221	-5.7	610	26.9	43	9.9	.....65-74
326	2.7	166	13.0	271	5.3	-349	-8.9	234	16.4	4	1.0	.....75 or older

in 1982 dollars, by type of income and income quintiles, 1984 and 1989¹

Income change, 1984-89												Income quintile
Total		Earnings		Social Security		Property		Pension		Other		
Dollar	Percent	Dollar	Percent	Dollar	Percent	Dollar	Percent	Dollar	Percent	Dollar	Percent	
\$30	0.8	\$11	15.1	\$96	3.1	-\$3	-1.8	\$53	68.8	-\$128	-22.6	.....1
275	4.1	80	23.0	114	2.3	28	4.7	54	12.1	-2	0	.....2
411	4.0	55	4.8	116	2.0	-6	-4	275	20.0	-30	-8.6	.....3
758	4.8	225	7.8	175	2.9	-270	-7.0	508	18.5	122	39.2	.....4
2,549	7.5	2,291	24.2	-83	-1.4	-1,121	-8.4	1,296	26.0	168	38.4	.....5
4,976	8.6	4,826	27.1	-109	-1.9	-1,480	-5.5	1,842	27.3	-103	-10.0	.....Top 5 percent

The composition of total income of aged units is shown by income quintile in table 12. In both years, the shares of earnings, property income, and pensions generally were higher in the higher income quintiles than in the lower income quintiles. The shares of Social Security benefits and other income were higher in the lower income quintiles than in the higher income quintiles.

The share of earnings rose slightly in the bottom four quintiles and rose sharply in the top quintile and the top 5 percent. The percentage of aged units with earnings rose from 52 percent to 57 percent for the top quintile and from 55 percent to 66 percent for the top 5 percent; there was little change for the other quintiles. The bottom quintile showed an increase in the

share of Social Security benefits, but all other quintiles showed a decrease. The share of property income fell sharply for the top two quintiles and the top 5 percent, fell slightly for the middle quintile, and showed essentially no change in the bottom two quintiles. The share of pensions rose for all groups, with the increase quite large for the top three quintiles. The percentage of aged units receiving pensions rose for each quintile. The bottom

Table 11.—Percentage composition of total income of family units, by type of income, and age of unit head, 1984 and 1989 ¹

Age of unit head	1984					1989				
	Earnings	Social Security	Property	Pension	Other	Earnings	Social Security	Property	Pension	Other
All ages...	75.5	7.7	9.3	4.1	3.3	76.7	7.3	8.3	4.6	3.1
Under 65.....	87.3	1.7	5.5	2.2	3.4	88.0	1.6	5.0	2.3	3.2
65 or older....	19.6	36.4	27.5	13.6	2.9	22.1	35.0	24.2	15.8	2.9
Under 25.....	89.2	.4	2.0	.1	8.3	89.8	.4	1.6	.2	8.0
25-34.....	93.6	.4	2.2	.4	3.4	94.0	.4	2.0	.3	3.3
35-44.....	92.2	.8	3.7	.5	2.9	92.4	.7	3.6	.6	2.7
45-54.....	87.9	1.4	5.8	2.0	3.0	88.9	1.1	5.5	1.8	2.7
55-64.....	71.6	5.4	12.7	7.3	2.9	71.1	5.3	11.5	8.9	3.2
65-74.....	24.4	33.2	25.0	14.6	2.8	27.8	30.4	21.8	17.1	2.8
75 or older....	10.5	42.3	32.3	11.7	3.2	11.6	43.4	28.6	13.3	3.1

¹ Income adjusted for size of family unit and age of head.

Source: Tabulations from March 1985 and March 1990 CPS files.

Table 12.—Percentage composition of total income of aged family units, by type of income, and income quintiles, 1984 and 1989 ¹

Income quintile	1984					1989				
	Earnings	Social Security	Property	Pension	Other	Earnings	Social Security	Property	Pension	Other
1.....	1.8	77.8	4.2	1.9	14.2	2.1	79.6	4.1	3.2	10.9
2.....	5.1	73.5	8.7	6.6	6.0	6.1	72.3	8.8	7.1	5.7
3.....	11.1	56.6	15.6	13.4	3.4	11.2	55.5	14.9	15.4	3.0
4.....	18.4	37.9	24.4	17.4	2.0	18.9	37.2	21.6	19.7	2.6
5.....	27.8	17.3	39.0	14.6	1.3	32.1	15.9	33.2	17.1	1.7
Top 5 percent..	30.6	9.9	46.2	11.6	1.8	35.8	8.9	40.2	13.6	1.5

¹ Income adjusted for size of family unit and age of head.

Source: Tabulations from March 1985 and March 1990 CPS files.

quintile showed a fall in the share of other income, but the other groups showed little change.

For the third quintile of aged units, the share of earnings changed very little (from 11.1 percent to 11.2 percent), the share of Social Security benefits fell from 56.6 percent to 55.5 percent (continuing the decline since 1979), the share of property income fell from 15.6 percent to 14.9 percent (reversing increases since 1967), and the share of pensions rose from 13.4 percent to 15.4 percent (continuing an increase since 1979).

Only the change for earnings differed substantially from the change for the aged group as a whole.

Socioeconomic Subgroups of the Aged

Relative medians for aged units (the median for the aged subgroup divided by the all ages median) are shown by type of family unit, sex, and age of unit head in table 13. In both 1984 and 1989, husband-wife families in the group aged 65-74

had the highest relative median of any of the groups shown (1.11 in 1984 and 1.09 in 1989) and female unrelated individuals in the age 75 or older group had the lowest relative median (0.48 in 1984 and 0.47 in 1989).

Changes in relative medians generally were small. In the group aged 65-74, four of the five groups showed an increase in relative median. In the 75 or older group, four of the five groups showed a

decrease. Unrelated individuals in the group aged 65-74 generally had the highest increase in median income over the 1984-89 period. Unrelated individuals aged 75 or older generally showed the lowest increase in median income. For the 1967-84 period, unrelated individuals, both male and female, in both age groups showed increases in relative medians. The declines in relative medians from 1984 to 1989 for all families and for husband-wife families reversed a trend in both age groups.²³

Relative medians for aged family units are shown by race and Hispanic origin in table 14. It should be noted that units of "other" race are not shown separately, but are included in the "all units" category. Units of Hispanic origin can be of any race. In both 1984 and 1989, white family units in the group aged 65-74 had the highest relative median (0.92 in 1984 and 0.91 in 1989) and black family units in the group aged 75 or older had the lowest relative median (0.37 in 1984 and 0.38 in 1989). In both age groups, relative medians for black units and for units of Hispanic origin were far below the relative medians for white units. Changes in relative medians generally were small. The lowest rates of income growth were found in the group aged 65-74 for black units (a decline of 0.8 percent per year) and in the group aged 75 or older for white units and for units of Hispanic origin.

Summary and Conclusions

In terms of changes in the incomes of age groups, the 1984-89 period was very different from the periods that immediately preceded

Table 13.—Relative median incomes of aged family units, by type of unit, and average annual percentage change in real median income, 1984-89¹

Age and type of family unit	Relative median		Average annual percentage income change
	1984	1989	
All ages (15 or older).....	1.00	1.00	1.4
Age 65-74			
All units.....	.88	.87	1.2
Families.....	1.08	1.05	.9
Husband - wife.....	1.11	1.09	1.0
Other male.....	1.03	1.06	2.1
Other female.....	.82	.86	2.3
Unrelated individuals.....	.58	.61	2.4
Male.....	.62	.69	3.6
Female.....	.57	.58	2.1
Age 75 or older			
All units.....	.64	.60	.2
Families.....	.84	.83	1.1
Husband - wife.....	.85	.83	1.1
Other male.....	.94	.82	-1.3
Other female.....	.83	.80	.7
Unrelated individuals.....	.50	.48	.8
Male.....	.54	.57	2.5
Female.....	.48	.47	.7

¹ Income adjusted for size of family unit and age of head.

Source: Tabulations from the March 1985 and March 1990 CPS files.

it. This summary focuses on changes for aged family units.

During the 1984-89 period, the rate of growth of real median income of aged units was substantially lower than in other subperiods since 1967, the first year for which comparable detailed estimates are available. During the 1984-89 period, the ratio of aged to nonaged median incomes fell for 4 consecutive years, after generally rising since about 1970. The relative medians of almost all detailed aged age groups fell at least slightly from 1984 to 1989, after a period of substantial rises. The increases in income for aged units during 1984-89 were higher for high-income units than for low-income units,

producing an increase in inequality. The percentage of aged persons who were poor fell slightly from 1984 to 1989, but that percentage remained above the rates for other adult age groups. A relatively high percentage of aged persons had income that was less than 50 percent above the poverty threshold.

The increase in the real mean total income of aged units from 1984 to 1989 was the net result of substantial increases in earnings and pension income and a substantial decrease in property income. In contrast, the much larger increase in real mean total income for aged units from 1979 to 1984 was characterized by a large increase in property income, substantial increases in Social Security benefits and pension income, and a small decrease in earnings.

Table 14.—Relative median incomes of aged family units, by race and Hispanic origin, and average annual percentage change in real median income, 1984-89 ¹

Age, race, and Hispanic origin	Relative median		Average annual percentage income change
	1984	1989	
All ages (15 or older).....	1.00	1.00	1.4
Age 65-74			
All units.....	.88	.87	1.2
White.....	.92	.91	1.3
Black.....	.49	.44	-.8
Hispanic.....	.59	.61	2.1
Age 75 or older			
All units.....	.64	.60	.2
White.....	.67	.63	.2
Black.....	.37	.38	1.7
Hispanic.....	.45	.43	.4

¹ Income adjusted for size of family unit and age of head.

Source: Tabulations from the March 1985 and March 1990 CPS files.

For the third (middle) income quintile of aged units, the modest increase in real mean total income from 1984 to 1989 resulted primarily from increases in pension income and Social Security benefits.

From 1984 to 1989, the composition of the income of aged units shifted slightly away from property income and Social Security benefits and toward earnings and pensions.

When aged units were separated into subgroups based on type of family unit, sex, and age, unrelated individuals aged 65-74 showed the highest income growth, and unrelated individuals aged 75 or older showed the lowest growth. For the aged, in both 1984 and 1989, black units and units of Hispanic origin had relative medians that were far below the relative medians of white units.

The results for the 1984-89 period emphasize that the relationship between aged and nonaged incomes can be sensitive to the level of economic performance in the economy as well as to long-run trends. Property income has played a particularly volatile role. These results have shown that it should not be automatically assumed that the income of the aged will rise relative to the income of the nonaged in the future. The relationship between the income levels of those groups in the future will depend on many factors.

Notes

¹ For a description of the CPS and definitions of total income and families and unrelated individuals, see Bureau of the Census (1991b). In the estimates in this article, each family unit is counted once, regardless of the number of persons in the unit. For a discussion of weighting of units and persons, see Danziger and Taussig (1979).

² Although the poverty thresholds, and therefore the equivalence scale used here, were formulated for low-income units, that same scale generally is applied at all income levels, as it is here. For example, a four-person family is assumed to need 2.13 times as much income as an aged unrelated individual needs, regardless of the level of income. This is an example of the many problems associated with the use of equivalence scales. For a recent comparison of several equivalence scales, see Buhmann et al. (1988).

³ These values were derived from table A-2 in Bureau of the Census (1989). This scale differs slightly from the scale used in Radner (1987a). Some of the 1984 estimates shown in that article therefore differ slightly from the estimates shown here.

⁴ Constant 1982 dollars and the PCE implicit price deflator are used to make the estimates consistent with the estimates in Radner (1987a). In the earlier article, the PCE implicit price deflator was used instead of the Consumer Price Index (CPI-U) because the CPI-U before 1983 contained a treatment of housing costs that produced excessive increases in the index according to many analysts. The values for the PCE implicit price deflator were obtained from Council of Economic Advisers (1991). Some of the estimates for 1984 in this article differ slightly from those in Radner (1987a) because the PCE implicit price deflator for 1984 was revised. The PCE implicit price deflator and the CPI-U rose at about the same rate from 1984 to 1989. The PCE implicit price deflator rose 3.7 percent per year (20.2 percent), while the CPI-U rose 3.6 percent per year (19.3 percent) during that period.

⁵ Research generally has shown that aged and nonaged units have faced about the same rate of increase in prices (for example, Bureau of Labor Statistics 1988; Bridges and Packard 1981).

⁶ Mean incomes are examined in this section because estimates of median incomes of family units are not available for as long a time period. Adjustment for differential needs was not possible.

⁷ Annual estimates show that the aged-nonaged ratio fell to its lowest value (0.49) in 1970. Changes in the age distribution can affect the summary aged-nonaged ratio. Those effects are one reason that more detailed age groups are shown in this section.

⁸ Annual estimates show that the 1989 aged-nonaged ratio was about equal to the 1948, 1949, and 1952 ratios. Many aspects of CPS data collection and processing have changed since the 1947 income data. Comparisons over this long time span, therefore, cannot be precise.

⁹ These are percentage changes from the previous year using annual averages. For example, the 1989 rise was computed by comparing annual average real gross national product for 1988 and 1989. The changes in the PCE implicit price deflator discussed below are also changes from the previous year using annual averages.

¹⁰ The ratios in table 2 differ from the aged-nonaged ratios in table 1 because the table 2 estimates use income amounts that have been adjusted for size of unit and age (which raises the ratios) and because table 2 is based on medians rather than means (which lowers the ratios).

¹¹ Some of the differences in rates of income growth result from sampling error.

The higher rates of income growth for the groups aged 65-74 than for the aged 75 or older groups resulted primarily from large increases in earnings and pensions for the group aged 65-74 (see table 9).

¹² The rate of increase in the median for the group aged 65 or older is not a simple function of the rates of increase in medians for subgroups of that group. One reason is that the composition of the group can change over time. Thus, even if the median for each subgroup were unchanged, the median for the group as a whole could change. From 1984 to 1989, the number of units aged 85 or older rose 18 percent, while the number aged 65-69 rose only 6 percent. The group aged 85 or older has the lowest median among the aged, while the group aged 65-69 has the highest median. Another reason for the complexity of the relationship is that the distribution of income within each subgroup becomes important when those subgroups are combined and a median is computed.

When the 1989 means for detailed aged groups were weighted using 1984 population weights, the mean for the aged group as a whole rose about 1/2 percent compared with

the actual 1989 mean. Thus, the change in the age distribution within the aged group had only a small downward effect on the mean income of the aged group as a whole.

¹³ Family units are ranked according to size of income adjusted for size of unit and age of unit head. Each family unit is counted once, regardless of the number of persons in the unit. The income shares refer to aggregate income adjusted for size of unit and age of head.

¹⁴ Inequality is often measured using Lorenz curves and the Gini concentration ratio. A Lorenz curve relates cumulated relative income shares and cumulated percentages of units, when the units are ranked by size of income (Radner 1987a). The Gini concentration ratio is a measure of inequality that can be interpreted as being based on a Lorenz curve. The lower the ratio, the more equal the distribution; zero is complete equality and 1 is complete inequality. Some comparisons of inequality are ambiguous even though differences between Gini concentration ratios exist. In this article, a distribution is considered to be more (less) equal than a second distribution if the Lorenz curve for the first distribution lies above (below) the Lorenz curve for the second distribution, with no intersection. If two Lorenz curves cross, the comparison is considered to be ambiguous. For a discussion of Gini concentration ratios, Lorenz curves, and the measurement of inequality, see Atkinson (1970).

¹⁵ This increase was higher than the increase for the median, 0.6 percent per year.

¹⁶ It should be noted that units can shift between quintiles in the 2 years and that some units are added to the group and others leave the group. Therefore, the changes shown here should not be interpreted as changes for the same units.

¹⁷ In the official definition of poverty, cash income before taxes is compared with poverty thresholds that differ according to size of family unit, number of children, and age of head. See Bureau of the Census (1991a) for a detailed definition.

¹⁸ Median total income cannot be obtained by summing the medians of component income types, whereas mean total income can be obtained by summing the means of component income types (if the means are for all units in the group, not just for those receiving that income type).

¹⁹ The available evidence suggests that the value of the assets that generate property income held by aged units did not fall from 1984 to 1988 (Bureau of the Census 1990b). Thus, the decline in property income shown here was probably primarily the result of a decline in interest rates.

²⁰ Changes in nominal interest rates can affect constant dollar interest income, which is used in the income estimates in this article, even if real interest rates are unchanged (Radner 1987b). Nominal interest rates include an inflation premium to offset the decline in the real value of the asset. Similar measurement problems arise for some other income types (Jump 1980).

²¹ Pension income and other income were not shown separately in Radner (1987a) because of data limitations. The estimates of pension change for 1979-84 were derived in part from estimates in Radner (1987b) and are slightly inconsistent with the changes in other income types shown for that period.

²² For the 1984-89 period, the lag in the automatic adjustment decreased real benefits because inflation was lower just prior to the period than at the end of the period. For the 1979-84 period, however, the lag increased real benefits because inflation was higher just prior to the period than at the end of the period.

²³ When 1984 population weights were applied to the 1989 means for the 10 age-sex-family unit type groups shown in table 13, mean income for the aged group as a whole rose less than 1/2 percent compared with the actual 1989 mean. Thus, changes in the composition of the aged group had only a small downward effect on the mean income of the aged group as a whole.

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