
Income Changes At and After Social Security Benefit Receipt: Evidence From the Retirement History Study

by Alan Fox*

This article details the changes in total income and the composition of its sources that occur upon initial receipt of Social Security benefits, and in the first 4 years thereafter. The study shows that, for many persons, "retirement" is a gradual process rather than an immediate cessation of all paid work. About half the persons entering the rolls continue at least some paid employment after benefit receipt. Even more do so if previous earnings were low or if they have no pension to supplement their benefits. In real terms, the average couple initially loses about one-third of its previous income, while nonmarried women, with less to begin with, lose somewhat less. In the time period studied, inflation was high in historical terms: the Consumer Price Index rose by approximately one-third in the 4-year period following benefit receipt. During that time, the real income of beneficiaries declined by about 10 percent from the levels immediately after benefit receipt. Fewer beneficiaries continued to work 4 years later, so earnings played a smaller role in total income. The real value of private pensions declined by about 20 percent in the 4-year period, but because most persons with such pensions had other, better-protected sources of income, their total income declined by less than 10 percent.

This article shows how income amounts and the sources of income change after receipt of Social Security retired-worker benefits. It also traces income sources and amounts during the first few years of benefit receipt. It is based on a sample of persons who entered the benefit rolls between the late 1960's and mid-1970's.¹

The time period of this study was characterized by rapid rates of inflation compared with the earlier post-war norm. Of special interest, therefore, is how well various income sources kept up with inflation during a period when, for most retirees, the composition of income sources and the amount of income based on a lifetime of work are unalterable. It will be seen that certain sources held up well against the onslaught of infla-

tion (Social Security benefits and, to a lesser extent, asset income), while others did less well (private pensions, for example). Earned income is the one source that is controllable by a substantial number of retirees—those healthy enough to seek work and with marketable skills—and may be used to offset the inroads of inflation. It will be shown that a considerable number of beneficiaries work, at least part time, after they begin to receive Social Security benefits. This pattern is especially common among those whose only pension is from Social Security and whose total income is by and large not very high. Although part-time work is relatively common, however, many persons stay in the labor force only for a few years after first receiving benefits.

This article increases in several ways our knowledge of income change among the elderly. It expands our already considerable knowledge of the income of all the elderly, seen at a point in time (Grad, 1984).² It ampli-

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¹ The term "retirement" is not used here, as the recipient of Social Security benefits may at the same time receive some earned income. To avoid confusion, the term "benefit receipt" is used throughout this article. Benefit receipt alone may be thought of as "full" retirement. Benefit receipt in the presence of earnings may be thought of as "partial" retirement.

² For an identification of references in the text, see the bibliography at the end of this article.

fies previous information on changes in private pension amounts after retirement (Thompson, 1978). It demonstrates the complexity of retirement: For many, it is a process of change, not a discrete event marking an abrupt transition from full-time work to complete leisure.

Finally, this article expands available knowledge about the adequacy of income at retirement, relative to preretirement income. Previous research has concentrated on the earnings replacement rate, which is the ratio of retirement benefits (Social Security and, if available, other pensions) to previous earnings (Fox, 1982). By including all other sources of income, notably asset income before Social Security benefit receipt and asset and earned income afterward, a total income ratio is obtained that presents a more comprehensive picture of changes in income available at that time. It will be seen that, when all sources are considered, the drop in income at benefit receipt is not quite as great as implied by replacement rates. This is mainly due to temporary income sources such as earnings.

The article is organized as follows. First, it describes the data set and methodology. The next section describes total income levels before benefit receipt, changes in the total at benefit receipt, and income composition before and at that point. Then the article describes changes from benefit receipt to 4 years later. Finally, the results are summarized.

Data and Methodology

Data for this analysis were derived from the Retirement History Study (RHS), a 10-year longitudinal study of a sample of married men and nonmarried persons aged 58-63 at its inception in 1969. By 1979, the last year of the survey, the sample was aged 68-73, and most were receiving Social Security benefits. (See Irelan et al. for a general description of the RHS, and Schwab and Irelan for an overview of findings.)

The reference point here is defined as the initial receipt of Social Security retired-worker (old-age) benefits.³ Receipt of such benefits tends to be a major watershed in the lives of most persons. Due to the earnings test, benefits cannot be paid in the presence of substantial earned income. For most beneficiaries, therefore, benefit receipt is accompanied by complete work cessation ("full retirement") or a major reduction in earnings ("partial retirement"). To avoid confusion between full and partial retirement, the term "benefit receipt" is used throughout this article.

The year of first benefit receipt and the type of bene-

³ Persons receiving disabled-worker benefits are excluded, and those who apply only for Medicare benefits are included only after they reduce their earnings sufficiently to receive cash benefits. Persons with cash benefits may have them suspended later on because of increased earnings; they are not excluded from this article.

fit were derived from internal Social Security Administration benefit records for each sample person (and spouse, if present). For those receiving retired-worker benefits, reported income sources and amounts were taken from survey waves just before and just after the first year of benefit receipt.⁴ Only persons receiving benefits between 1969 and 1977 could be analyzed, since income before 1968 or after 1978 was outside the survey's range. For the subset of persons first receiving benefits between 1968 and 1973, income just after benefit receipt could be compared with income 4 years later to give some indication of what happens during the first few years on the benefit rolls.

For married beneficiaries, pre-benefit income was taken from the survey year before the first spouse claimed benefits, and post-benefit income came from the first survey year after the second spouse began receiving benefits. In general, the husband, being older, was the first to receive benefits; only 1 husband in 5 received benefits after his wife, as the following tabulation shows.

Total number ¹	2,470
Total percent	100
Wife's first benefit received—	
After husband's:	
5 years or more	6
3-4 years	12
2 years	10
1 year	11
Same year as husband's	42
Before husband's:	
1 year	6
2 years	4
3-4 years	5
5 years or more	5

¹ Husband receiving retired-worker benefit, wife receiving retired-worker or spouse benefit.

Source: Technical Note to Fox, 1982, table VIII.

In more than half the couples the wife started receiving her benefits within a year of her husband; the period with only one spouse receiving benefits rarely exceeded 2 years. For simplicity, and because it would consist of a mixture of "retirement" and "working" sources, this article does not analyze income received during this interim period.

Several types of statistics are used here. The first is a measure of income change, the ratio of income at a

⁴ The RHS sample was interviewed at 2-year intervals, and income data were obtained for the calendar year before each interview. For those first receiving benefits in an odd-numbered year, income in the preceding year was compared with income in the subsequent year, a 2-year span. For even-year beneficiaries, the span was 4 years. Some examples: For 1971 beneficiaries, income in 1970 (from the 1971 survey wave) was compared with 1972 income (1973 survey). For 1972 beneficiaries, 1970 income was compared with that for 1974. Income tends to continue dropping after benefit receipt, chiefly because of a decrease in the number of beneficiaries with earnings. Therefore, by combining those with 4-year and 2-year income spans, the decrease in income "at" benefit receipt is slightly overstated.

point in time to income at a previous time (for example, income immediately after benefit receipt divided by income before then). These ratios are expressed in percentage terms—that is, 100 (percent) is equivalent to 1.00 (ratio). Because of reporting errors inevitable in any survey, a ratio within 10 points of 100 implies essentially no change; accordingly, the range 90–110 is labeled “no change” in the summary tables. Most income ratio distributions are in three parts: a detailed distribution, a summary (drop/constant/rise), and finally the first quartile, the median, and the third quartile. The second type of statistic is the **percentage receiving each source**; because of multiple sources, these figures can add to more than 100. The third type is the **average amount per recipient** of each source. Finally, **shares of aggregate income** represent the total amount of each source received by all persons in a group as a fraction of the aggregate total income of all persons in that group. This type of statistic reflects both the percentage having each source of income and the average amount per recipient. Thus, a source that is rarely reported, but in large amounts when it is, represents a small *share* of the aggregate but a high average *amount* per recipient.

All income amounts are expressed in December 1982 dollars, reflecting the most recent Consumer Price Index available at the time the data were manipulated. Because of this adjustment, income ratios show how income kept up with inflation: a ratio over 100 indicates a rise in real income. In fact, a ratio slightly under 100 can still represent parity in terms of disposable income, since Social Security benefits, a major source of retirement income, are for most persons completely tax-free.⁵

In various parts of this article results are classified by whether a pension was received in addition to Social Security. Although by no means universally true, persons receiving such pensions generally have worked in higher-paying and steadier jobs than those without them, and represent a clearly separate analysis group. Most analysis is categorized by sex and marital status: married couples (married men and their wives only; married women were not sampled separately by the RHS), nonmarried men, and nonmarried women. Of the three groups, nonmarried men are by far the smallest in number, and are not emphasized in the text.

This article emphasizes income changes among a specific group claiming benefits about a decade ago. Some absolute income levels are shown as well but, because of sampling and methodological differences, these levels cannot easily be compared with other income data for the entire population, such as those obtained in the Current Population Survey.

⁵ Under the 1983 Amendments to the Social Security Act, Social Security benefits received in conjunction with high amounts of other income are taxable. This change affects only the highest-income retirees, and does not greatly alter any conclusions arrived at in this article.

Income Change at Benefit Receipt

This section examines income soon after first receipt of Social Security benefits. It also shows how the amount and composition of this income relate to the period just before benefit receipt. As explained in the previous section, income in the first survey year after receipt of cash Social Security benefits is compared with income in the last survey year before benefit receipt. For married men, the couple's total income in the first year after the second spouse (usually the wife) began receiving benefits is compared with income before the first spouse (usually the husband) began receiving benefits.

Income levels before benefit receipt and changes that occur at that point are shown in table 1. As expected, married couples had the highest previous incomes: the median was \$23,800, compared with \$14,600 for nonmarried men and \$11,300 for nonmarried women. On the other hand, married couples lost the most income at benefit receipt: their ratio of median income at benefit receipt to median income before then was 65, compared with 69 and 76 for nonmarried men and nonmarried women, respectively. Stated differently, couples and nonmarried men lost about one-third of their previous income upon benefit receipt, while nonmarried women, with much less income to begin with, lost only one-fourth.

Persons with pensions other than Social Security had considerably higher income levels just before benefit receipt than did those without such pensions: the median amounts were one-third higher for married couples, and two-thirds and 85 percent higher, respectively, for the relatively few nonmarried men and women with pensions. For married couples, the median income ratio was similar whether or not they were receiving a second pension—64 and 69, respectively. However, the distribution of ratios was somewhat different for married couples with and without second pensions: almost one-fourth of the nonrecipients of pensions experienced a rise in real income (a ratio over 110, adjusted for changes in the Consumer Price Index), compared with less than one-tenth of the pensioners. By contrast, nonmarried men and nonmarried women with second pensions had a more severe income drop at retirement than did those without pensions: the respective median income ratios were 63 and 75 for nonmarried men, and 69 and 81 for nonmarried women. This disparity reflects the very low previous incomes of nonmarried persons without pensions.

The composition of income changed radically at benefit receipt, as shown in table 2. Before benefit receipt, virtually everyone had earned income, as expected. Almost half had earned income afterwards as well, but many persons moved to part-time work, and as a result average earnings dropped to one-third or less of their previous levels. The share of aggregate income ac-

Table 1.—Pre-benefit total income and income ratios at benefit receipt, by receipt of pension other than Social Security, sex, and marital status¹

Income level and ratio	Couples			Nonmarried men			Nonmarried women		
	Total	With pension	Without pension	Total	With pension	Without pension	Total	With pension	Without pension
Pre-benefit total income: 2									
Total number	2,526	931	1,595	342	111	231	814	276	538
Total percent	100	100	100	100	100	100	100	100	100
Less than \$5,000	4	1	5	16	6	20	18	4	25
\$5,000-\$9,999	6	2	9	17	7	22	26	15	31
\$10,000-\$14,999	11	6	14	18	14	21	23	22	23
\$15,000-\$19,999	16	13	18	19	26	16	16	24	12
\$20,000-\$24,999	16	19	14	14	19	12	8	14	5
\$25,000-\$29,999	14	16	12	7	12	4	3	7	2
\$30,000-\$39,999	16	21	14	7	13	4	4	9	2
\$40,000-\$49,999	8	10	6	1	2	1	2	2	1
\$50,000 or more	10	13	8	2	4	2	1	2	0
First quartile	\$16,190	\$21,050	\$13,650	\$8,220	\$14,630	\$6,210	\$6,340	\$11,500	\$5,010
Median income	23,840	27,920	21,160	14,620	19,570	11,740	11,330	16,620	8,920
Third quartile	34,260	38,720	30,650	21,460	26,060	18,080	17,180	23,190	13,980
Total income ratio: 3									
Total number	1,676	900	776	253	108	145	754	274	480
Total percent	100	100	100	100	100	100	100	100	100
0.1-19.9	3	2	4	2	1	3	2	2	3
20.0-39.9	11	9	14	13	12	14	9	5	11
40.0-59.9	29	32	25	24	32	17	25	32	21
60.0-79.9	26	32	18	22	23	21	17	22	14
80.0-99.9	14	15	12	8	10	7	16	18	15
100.0-124.9	7	5	9	11	6	14	14	10	16
125.0-149.9	4	2	7	8	6	9	7	5	8
150.0 or more	7	3	11	12	9	14	10	6	12
Drop: Ratio less than 90	76	83	67	65	74	59	61	72	54
Constant: Ratio 90-110	9	9	9	11	7	13	15	11	18
Rise: Ratio more than 110	15	8	24	24	18	28	24	17	28
First quartile	49	51	46	49	50	47	53	54	51
Median ratio	65	64	69	69	63	75	76	69	81
Third quartile	89	80	107	109	92	119	108	94	116

¹ Limited to those first receiving retired-worker benefits in 1969-77.

² In December 1982 dollars.

³ Ratio of post-benefit to pre-benefit total income in nearest survey year, in constant dollars. For married men, couple's total income in nearest year before

first spouse received benefit is compared with total income in nearest year after second spouse claimed benefit. Not computed if total income, following longitudinal edit, is not available for both years.

counted for by earnings dropped from more than 80 percent to around 20 percent.⁶

By contrast, receipt of pension income of all sorts was rare before Social Security benefit receipt, but represented 60 percent of aggregate income immediately afterward. While the average amount of the non-Social Security pension was about the same as the average Social Security benefit for those who had both, only about half the couples or nonmarried persons had such pensions. Thus, about 20 percent of aggregate income came from pensions other than Social Security, compared with 40 percent from Social Security benefits.

Fewer nonmarried persons received pensions other than Social Security, but that source's share of income was virtually the same as for married couples. About 20 percent of aggregate income came from non-Social Security pensions, compared with 40 percent from Social Security benefits.

⁶ The extent of continued work after retirement is perhaps overstated because only persons remaining in the survey through 1979 are included in the sample. Those dropping out (by death, institutionalization, or refusal to participate) before 1979 were presumably less healthy and therefore less likely to continue working after benefit receipt.

A majority of persons had some asset income both before and after benefit receipt. The average amount rose at benefit receipt after adjusting for inflation, though more for married couples than for nonmarried persons. This rise, in conjunction with declines in other income sources, considerably pushed up asset income's share of the aggregate, especially for married couples (from 9 percent to 20 percent). The increases in incidence and amount of asset income were smaller for the nonmarried, so assets' share of the total rose less dramatically for members of that group.

Change by Pension Receipt

An examination of pension receipt in table 2 reveals some interesting contrasts in income amounts and composition after benefit receipt. About twice the proportion of beneficiaries without pensions other than Social Security continued to work: 57 percent compared with 26 percent among married men, for example. Furthermore, those without pensions who did work earned more than workers with pensions, both absolutely and relative to their earnings before benefit receipt. In absolute terms, married men without pensions

Table 2.—Composition of total income before and immediately after initial benefit receipt, by receipt of pension other than Social Security, sex, and marital status: Percent receiving selected sources, average amount per recipient, and shares of aggregate income¹

Item	Total		With other pension		Without other pension	
	Before benefit receipt	At benefit receipt	Before benefit receipt	At benefit receipt	Before benefit receipt	At benefit receipt
Married couples						
Percent receiving source:						
Total number	2,526	1,987	931	1,051	1,595	936
Earnings	97	48	98	34	97	63
Respondent	96	41	96	26	95	57
Spouse	39	16	38	13	40	19
Pension income, total	15	97	21	100	12	94
Social Security	5	96	5	97	5	94
Other pensions	11	53	19	100	7	0
Asset income	67	72	74	79	62	64
Public welfare	1	3	0	1	1	5
Other income ²	10	7	9	6	10	8
Average amount per recipient:³						
Total income	\$28,280	\$18,140	\$32,780	\$21,000	\$25,650	\$14,920
Earnings	24,810	6,810	28,910	5,700	22,400	7,480
Respondent	21,070	5,880	24,920	4,700	18,790	6,490
Spouse	10,150	5,380	11,210	5,410	9,570	5,350
Pension income, total	8,190	11,280	8,450	15,270	7,920	6,520
Social Security	3,430	7,420	3,700	8,210	3,290	6,500
Other pensions	9,350	7,240	8,680	7,240	10,380	....
Asset income	3,910	4,920	3,440	4,460	4,230	5,570
Public welfare	(4)	2,170	(4)	(4)	(4)	2,230
Other income ²	2,510	4,120	1,730	3,360	2,910	4,840
Shares of aggregate income:						
Total percent	100	100	100	100	100	100
Earnings	85	18	86	9	85	32
Respondent	71	13	73	6	70	25
Spouse	14	5	13	3	15	7
Pension income, total	4	60	6	73	4	41
Social Security	1	39	1	38	1	41
Other pensions	4	21	5	34	3	0
Asset income	9	20	8	17	10	24
Public welfare	0	0	0	0	0	1
Other income ²	1	2	1	1	1	2
Nonmarried men						
Percent receiving source:						
Total number	342	285	111	120	231	165
Earnings	90	41	87	19	91	58
Pension income, total	13	98	22	100	9	96
Social Security	4	94	4	92	4	96
Other pensions	10	42	21	100	5	0
Asset income	50	50	64	64	43	39
Public welfare	4	6	1	2	5	9
Other income ²	11	10	9	5	12	13
Average amount per recipient:³						
Total income	\$16,760	\$10,790	\$22,020	\$14,500	\$14,230	\$8,100
Earnings	16,370	5,120	21,470	3,910	14,010	5,410
Pension income, total	5,530	7,020	(4)	11,460	(4)	3,640
Social Security	(4)	4,370	(4)	5,420	(4)	3,640
Other pensions	6,170	6,450	(4)	6,450	(4)	....
Asset income	2,040	2,910	2,460	3,230	1,740	2,530
Public welfare	(4)	(4)	(4)	(4)	(4)	(4)
Other income ²	2,110	2,700	(4)	(4)	2,310	(4)
Shares of aggregate income:						
Total percent	100	100	100	100	100	100
Earnings	88	20	85	5	90	38
Pension income, total	4	63	7	79	2	43
Social Security	1	38	1	35	1	43
Other pensions	4	25	6	44	2	0
Asset income	6	13	7	14	5	12
Public welfare	1	1	0	0	1	2
Other income ²	1	2	1	1	2	4

See footnotes at end of table.

Table 2.—Composition of total income before and immediately after initial benefit receipt, by receipt of pension other than Social Security, sex, and marital status: Percent receiving selected sources, average amount per recipient, and shares of aggregate income¹—Continued

Item	Total		With other pension		Without other pension	
	Before benefit receipt	At benefit receipt	Before benefit receipt	At benefit receipt	Before benefit receipt	At benefit receipt
Nonmarried women						
Percent receiving source:						
Total number	814	856	276	309	538	547
Earnings	89	44	90	25	88	54
Pension income, total	22	94	28	100	18	91
Social Security	15	93	14	96	16	91
Other pensions	10	36	22	100	3	0
Asset income	60	62	75	78	53	53
Public welfare	2	6	0	1	3	10
Other income ²	10	11	8	8	11	13
Average amount per recipient:³						
Total income	\$13,720	\$9,730	\$19,300	\$13,680	\$10,860	\$7,490
Earnings	12,730	4,630	17,950	3,880	9,980	4,830
Pension income, total	4,100	6,300	5,250	10,550	3,190	3,670
Social Security	2,880	4,260	3,030	5,280	2,810	3,650
Other pensions	4,620	5,460	4,830	5,460	(4)	...
Asset income	2,170	2,270	2,010	2,470	2,280	2,110
Public welfare	(4)	1,680	(4)	(4)	(4)	1,670
Other income ²	1,730	2,050	(4)	2,560	1,830	1,860
Shares of aggregate income:						
Total percent	100	100	100	100	100	100
Earnings	82	21	84	7	81	35
Pension income, total	6	61	8	77	5	45
Social Security	3	41	2	37	4	44
Other pensions	3	20	6	40	1	0
Asset income	10	14	8	14	11	15
Public welfare	0	1	0	0	1	2
Other income ²	1	2	1	2	2	3

¹ Limited to persons or couples first receiving retired-worker benefits in 1968-78 (for amounts before benefit receipt), and in 1968-76 (at benefit receipt). Total numbers tabulated at benefit receipt are therefore slightly lower than before benefit receipt.

² Includes State sickness compensation, workers' compensation, unemployment compensation, private welfare or relief, contributions from outside the

household, disability income other than Social Security, and other income.

³ Individual or couple receiving source. Total earnings reflect sum of earnings of respondent and/or spouse. Total pensions reflect sum of Social Security and/or other pensions. Figures in December 1982 dollars.

⁴ Not computed; base less than 25 sample cases.

had average post-benefit earnings of \$6,500, compared with \$4,700 for married men with pensions. For non-married women the respective earnings levels were \$4,800 and \$3,900. The average worker without a second pension earned one-third to one-half as much after benefit receipt as before, compared with only one-fifth as much among pensioners who continued working.

These employment patterns greatly influenced the final shape of the income distributions. Among married couples, the earnings of those without pensions other than Social Security accounted for one-third of their aggregate income after benefit receipt, compared with only one-tenth of the income of those with such pensions. Social Security benefits accounted for only 41 percent of the aggregate income of those without pensions, while for those with pensions the sum of Social Security and these pensions accounted for 73 percent of their aggregate income. Asset income accounted for 24 percent of the aggregate income of nonpensioners, compared with 17 percent for those with pensions.

Change by Pre-Retirement Income Level

Income ratios and composition are shown by level of income before benefit receipt in table 3. Those with the lowest previous income had little drop in income upon benefit receipt, or even saw their income increase. In part, this is due to the ability of low-income persons to continue earning close to their previous amounts and still collect Social Security benefits. For married couples with low income, the median income ratio was 87 (which, after income taxes, means virtually constant disposable income), while the average nonmarried woman in this category showed a substantial increase, with a median of 113. Those with medium or high previous incomes had considerably lower income ratios at benefit receipt: the median indicated about a 40-percent drop in gross income for these persons (somewhat less net of taxes).

What distinguishes the low-income third of the population from the others?

Table 3.—Income ratios and composition at benefit receipt by level of pre-benefit income: Total income ratio, percent receiving selected sources, average amount per recipient, and shares of aggregate income, by sex and marital status¹

Item	Couples, pre-benefit income—			Nonmarried men, pre-benefit income—			Nonmarried women, pre-benefit income—		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Total income ratio:									
Total number	561	570	545	91	84	78	255	249	250
Total percent	100	100	100	100	100	100	100	100	100
Drop: Ratio less than 90	52	86	90	36	75	88	28	72	84
Constant: Ratio 90-110	15	7	4	16	8	6	20	16	10
Rise: Ratio more than 110	32	8	5	47	17	5	52	12	6
Median	87	63	55	107	61	57	113	65	59
Percent receiving source:									
Earnings	58	42	44	50	43	28	50	41	40
Respondent	54	35	35	...	...	...	...	...	...
Spouse	17	14	16	...	...	...	...	...	...
Pension income, total	97	98	98	98	98	97	94	94	96
Social Security	95	96	96	97	96	91	93	92	95
Other pensions	27	61	73	18	40	76	11	34	65
Asset income	55	75	90	33	55	72	42	63	85
Public welfare	5	1	1	12	2	1	15	3	1
Other income ²	5	6	10	10	8	9	10	13	10
Average amount per recipient:³									
Total income	\$11,590	\$16,470	\$27,050	\$6,670	\$10,420	\$17,440	\$6,100	\$8,360	\$15,040
Earnings	5,560	7,320	8,590	4,230	5,690	6,880	3,410	5,150	5,790
Respondent	5,020	6,100	7,640	...	...	...	...	...	...
Spouse	3,260	6,800	6,660	...	...	...	...	...	...
Pension income, total	6,890	11,320	15,820	3,650	6,630	12,210	3,740	5,380	10,040
Social Security	5,850	8,040	8,750	2,950	4,970	5,860	3,030	4,310	5,670
Other pensions	3,780	5,360	9,680	(4)	4,140	8,680	6,320	3,010	6,540
Asset income	2,420	2,840	8,090	1,540	2,180	4,530	1,050	1,500	3,350
Public welfare	2,120	(4)	(4)	(4)	(4)	(4)	1,540	(4)	(4)
Other income ²	4,530	2,740	4,830	(4)	(4)	(4)	2,030	1,790	2,390
Shares of aggregate income:									
Total percent	100	100	100	100	100	100	100	100	100
Earnings	28	19	14	32	23	11	28	25	15
Respondent	23	13	10	...	...	...	...	...	...
Spouse	5	6	4	...	...	...	...	...	...
Pension income, total	57	67	57	54	62	68	57	60	64
Social Security	48	47	31	43	46	31	46	47	36
Other pensions	9	20	26	11	16	38	11	12	28
Asset income	12	13	27	8	11	19	7	11	19
Public welfare	1	0	0	3	1	0	4	0	0
Other income ²	2	1	2	4	2	2	3	3	2

¹ Limited to those first receiving retired-worker benefits in 1969-77. Not computed if total income not available at each time period. Pre-benefit income tercile limits are: married couples, \$18,730 and \$29,840; nonmarried men, \$10,110 and \$19,080; and nonmarried women, \$8,230 and \$15,050.

² Includes State sickness compensation, workers' compensation, unemployment

compensation, private welfare or relief, contributions from outside the household, disability income other than Social Security, and other income.

³ See footnote 3, table 2.

⁴ Not computed; base less than 25 sample cases.

- More work, especially among the men. About half the men with the lowest income had earnings after benefit receipt, compared with one-third of those with higher incomes. Earnings accounted for one-fourth of their aggregate income, compared with about one-tenth among those with higher incomes. For women, these differences were not quite as pronounced.

- Far fewer had pensions other than Social Security. Among married men, one-fourth of those with the lowest incomes had pensions, compared with three-fourths among the high-income group, and the share of pensions in total income was one-third as high—8 percent, compared with 26 percent. The same generally was true of the nonmarried women,

although even fewer with low incomes had pensions than among married couples.

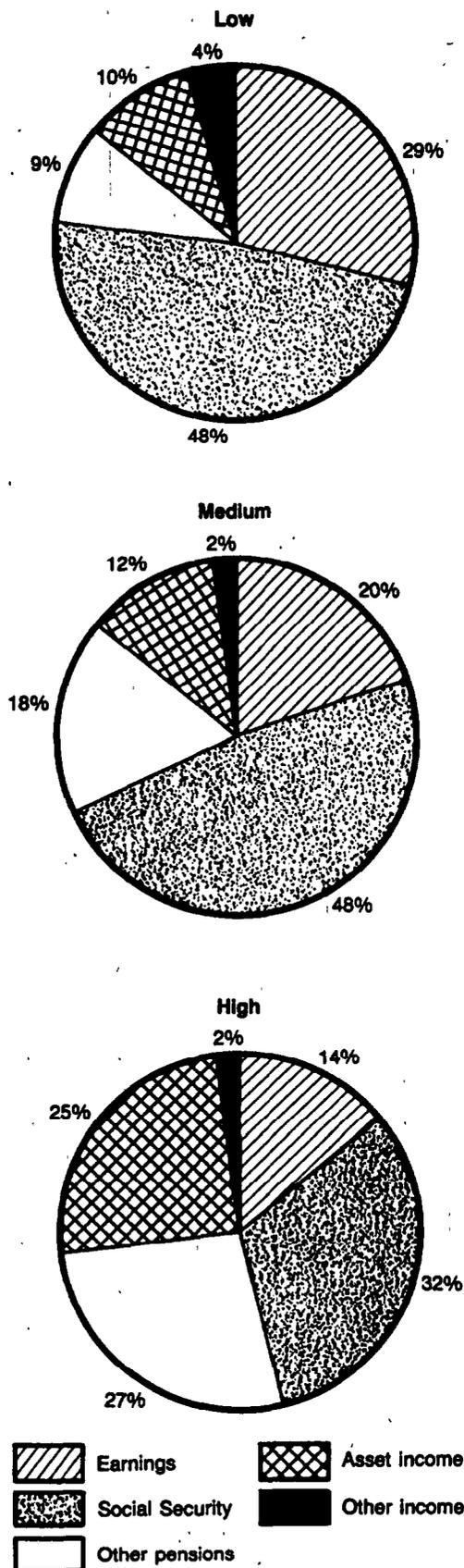
- Asset income accounted for only about one-tenth of aggregate income, compared with up to one-fourth within the highest-income group.

These results are highlighted in chart 1.

Change by Income Level and Pension Receipt

As noted above, high income in the prime working years is generally associated with receipt of a pension other than Social Security after benefit receipt: the proportion of couples with this source of income increases from 27 percent to 73 percent between the lowest and highest income levels (table 3). A previous article noted

Chart 1.—Income shares at benefit receipt, by level of previous income



that the receipt of second pensions tends to even-out the level of earnings-replacement rates as income rises; among high earners, income from pensions tends to offset their low Social Security replacement rates (Fox, 1982, table 8).

About one-fourth of those with high pre-benefit incomes had no pensions other than Social Security, however. Their Social Security replacement rates are very low indeed—about 25 percent (Fox, 1982, table 8). What other income sources do they rely on in retirement?

As shown in table 4, persons with the highest previous incomes but no pensions other than Social Security incurred the greatest decrease in total income of any group. However, the decrease in their total income—about 50 percent—was far less than the 75-percent decrease implied by their low replacement rates (Social Security benefits divided by previous earnings). Several factors account for this. Most importantly, the incidence and amount of asset income after benefit receipt were far higher than among the lower-income groups without pensions: 84 percent reported asset income, compared with about 55 percent among the two lower-income groups. Moreover, asset income accounted for 36 percent of their aggregate income, compared with about 13 percent among the lower-income groups. Also, although no greater proportion continued working than among the lower-income groups, those who did work earned considerably more: about \$9,000, compared with about \$5,000 among the two lower-income groups.

Thus, while incurring a considerable decrease in their total income on benefit receipt, the group with high previous income but no pension other than Social Security was quite well-off in absolute terms. Their average total income after benefit receipt (\$20,700) was second only to that of pensioners with the highest previous income (\$23,600).

Change by Occupation of Longest Job

Income ratios and composition are shown by occupation of longest job in table 5. Generally, these figures reflect income patterns of the individual occupations. Persons in high-income occupations tend to show greater income decreases at benefit receipt than those in occupations with low incomes, and vice versa. Thus, although private household workers and farmers experienced little or no income drop at retirement (in fact, the former had a substantial income increase), the remainder showed decreases of around one-third.

Post-benefit work was reported by 71 percent of the private household workers, reflecting both their ability to continue working at low pay and simultaneously receive Social Security benefits and their need to work because of low income. In fact, for this group, composed mostly of nonmarried women, earnings accounted for

Table 4.—Income ratios and composition at benefit receipt by level of pre-benefit income and receipt of pension other than Social Security: Total income ratio, percent receiving selected sources, average amount per recipient, and shares of aggregate income ¹

Item	With other pension				Without other pension			
	Total	Low	Medium	High	Total	Low	Medium	High
Total income ratio:								
Total number	1,282	193	468	621	1,401	714	435	252
Total percent	100	100	100	100	100	100	100	100
Drop: Ratio less than 90	80	42	84	90	62	44	78	85
Constant: Ratio 90-110	9	22	8	6	12	15	11	7
Rise: Ratio more than 110	11	37	8	4	26	40	12	8
Median	64	96	66	57	73	97	59	49
Percent receiving source:								
Earnings	31	32	26	34	60	61	58	58
Respondent	25	28	21	28	56	59	54	54
Spouse	10	8	9	10	11	11	10	13
Pension income, total	100	100	100	100	93	95	93	91
Social Security	96	95	97	97	93	95	93	91
Other pensions	100	100	100	100	0	0	0	0
Asset income	78	62	73	88	58	46	66	84
Public welfare	1	2	1	0	7	10	2	1
Other income ²	7	5	7	8	10	8	9	14
Average amount per recipient: ³								
Total income	\$18,950	\$12,760	\$14,970	\$23,580	\$11,770	\$8,660	\$12,270	\$20,700
Earnings	5,300	4,100	4,660	5,870	6,480	4,990	7,510	10,350
Respondent	4,450	3,850	3,660	5,200	5,790	4,580	6,660	9,120
Spouse	5,450	(4)	5,360	5,740	5,500	3,310	7,850	8,530
Pension income, total	13,980	10,290	12,150	16,320	5,300	4,370	6,010	7,260
Social Security	7,380	6,270	7,470	7,760	5,280	4,360	5,960	7,260
Other pensions	6,800	4,160	4,850	8,770	...	...	...	...
Asset income	3,960	1,640	1,940	5,620	4,310	2,160	3,060	8,760
Public welfare	(4)	(4)	(4)	(4)	1,900	1,820	(4)	(4)
Other income ²	3,140	(4)	2,230	3,560	3,250	3,420	2,440	4,700
Shares of aggregate income:								
Total percent	100	100	100	100	100	100	100	100
Earnings	9	10	8	8	33	35	36	29
Respondent	6	8	5	6	28	31	30	24
Spouse	3	2	3	2	5	4	6	5
Pension income, total	74	81	81	69	42	48	46	32
Social Security	38	47	48	32	42	48	45	32
Other pensions	36	33	32	37	0	0	0	0
Asset income	16	8	10	21	21	11	17	36
Public welfare	0	0	0	0	1	2	0	0
Other income ²	1	1	1	1	3	3	2	3

¹ Limited to those first receiving retired-worker benefits in 1969-77.

² Includes State sickness compensation, workers' compensation, unemployment compensation, private welfare or relief, contributions from outside the

household, disability income other than Social Security, and other income.

³ See footnote 3, table 2.

⁴ Not computed; base less than 25 sample cases.

as high a proportion of aggregate income as all pensions, far higher than other occupations, where post-benefit earnings accounted for only one-fourth as much as pension benefits.

Farmers, managers, and non-household service workers also had a high propensity to continue working. In the case of managers, a strong work orientation may be the cause. For service workers, low income may drive some to continue working. Farmers have above-average total incomes, but also enjoy the ability to adjust their work hours to meet the earnings test or their own desires for part-time work. By contrast, crafts workers and machine operators rarely can adjust their working hours downward, and were therefore unlikely to continue working.

Receipt of Social Security benefits was almost universal, except for private household workers, 13 percent of whom did not have such income in the first post-benefit survey, conducted 1-2 years after the initial re-

ceipt of benefits. Presumably, these persons in the meantime had had their benefits suspended so that they could continue to work.

Three-fourths of professional and technical workers had pensions other than Social Security—a proportion far higher than the overall figure of 49 percent. By contrast, only 3 percent of private household workers and 11 percent of farmers had pensions other than Social Security. Laborers often work in large companies with formal labor-management arrangements such as union contracts, so the proportion receiving pensions other than Social Security—39 percent—was not as low as might have been expected from their low income level.

Receipt of asset income and the share of assets in the income aggregate follow closely from the general economic status of persons in a given occupation. Professional and technical workers, managers, and farmers received almost 30 percent of their aggregate retirement income from assets. A high proportion of clerical and

Table 5.—Income ratios and composition at benefit receipt, by occupation of longest job: Total income ratio, percent receiving selected sources, average amount per recipient, and shares of aggregate income¹

Item	Total	Profes- sional and technical	Managers	Clerical and sales	Crafts and oper- atives	Service except private household	Service: private household	Laborers	Farmers
Total income ratio:									
Total number	2,463	255	342	365	975	213	63	144	90
Total percent	100	100	100	100	100	100	100	100	100
Drop: Ratio less than 90	73	74	75	72	80	68	29	67	53
Constant: Ratio 90-110	11	11	10	12	8	14	21	12	10
Rise: Ratio more than 110	16	15	15	16	12	18	51	21	37
Median	66	64	64	69	62	69	111	69	86
Percent receiving source:									
Earnings	45	41	49	44	38	51	71	49	62
Respondent	40	38	47	40	32	48	71	42	58
Spouse	10	6	10	8	12	9	1	15	13
Pension income, total	97	98	96	95	97	96	87	97	97
Social Security	95	96	95	93	96	96	87	93	97
Other pensions	49	74	46	51	55	37	3	39	11
Asset income	67	89	83	76	63	56	24	41	65
Public welfare	4	0	1	2	4	7	17	14	4
Other income ²	9	7	9	12	8	9	9	8	4
Average amount per recipient:³									
Total income	\$15,150	\$23,870	\$21,760	\$14,060	\$13,200	\$10,540	\$5,290	\$11,010	\$16,250
Earnings	5,910	6,670	7,330	6,290	5,190	4,720	3,510	5,240	9,160
Respondent	5,260	6,300	6,260	5,490	4,490	4,200	3,220	4,560	9,100
Spouse	5,400	(4)	6,940	7,830	4,940	(4)	(4)	4,180	(4)
Pension income, total	9,800	14,720	12,000	8,870	9,800	6,850	2,620	7,670	6,150
Social Security	6,390	7,090	7,490	5,840	6,930	4,560	2,460	5,120	5,800
Other pensions	6,810	10,390	9,510	5,920	5,160	6,110	(4)	6,790	(4)
Asset income	4,030	6,980	7,620	3,290	2,180	1,960	(4)	1,470	6,960
Public welfare	1,900	...	(4)	(4)	1,540	(4)	(4)	(4)	(4)
Other income ²	2,980	(4)	3,620	2,250	2,260	(4)	(4)	(4)	(4)
Shares of aggregate income:									
Total percent	100	100	100	100	100	100	100	100	100
Earnings	17	12	16	20	15	23	47	23	35
Respondent	14	10	14	16	11	19	43	18	32
Spouse	4	1	3	4	4	4	4	6	2
Pension income, total	62	61	53	60	72	63	43	67	37
Social Security	40	29	33	39	50	41	40	43	35
Other pensions	22	32	20	21	21	21	2	24	2
Asset income	18	26	29	18	10	10	2	6	28
Public welfare	1	0	0	1	0	1	5	2	0
Other income ²	2	2	2	2	2	3	3	1	0

¹ Limited to those first receiving retired-worker benefits in 1969-77. Longest job defined as of 1969 survey.

² Includes State sickness compensation, workers' compensation, unemployment compensation, private welfare or relief, contributions from outside the

household, disability income other than Social Security, and other income.

³ See footnote 3, table 2.

⁴ Not computed; base less than 25 sample cases.

sales workers had asset income, but in relatively small amounts, resulting in only an 18-percent share. For craft workers and machine operators, service workers, and laborers, asset income amounted to 10 percent or less of the aggregate amount.

Public welfare income was received by about 15 percent of private household workers and laborers. Only for the former, however, did it provide as much as 5 percent of aggregate income.

Change by Industry of Longest Job

Persons who had worked in agriculture, forestry, and fishing and in the trade and service industries were more likely than most to have earnings after benefit receipt (table 6). Those who had been employed in mining, transportation and public utilities, and in public administration and the Armed Forces were the least likely to continue working. Pensions other than Social Security

were received by about 85 percent of those who had served in public administration or the Armed Forces; for them, such pensions represented 50 percent of aggregate income, more than twice the overall average. This finding reflects both substantial pension coverage in the public sector and the fact that many public pensions take the place of Social Security. Transportation and public utility workers and miners also had above-average pension receipt. Asset income was spread fairly evenly across industries; workers in finance, insurance, and real estate had a substantially higher-than-average incidence and share of this source.

Detailed Income Composition

Post-benefit income composition is shown in detail in table 7. Highlights include:

Earnings. Self-employment is relatively common as a source of earnings after benefit receipt for married men.

Table 6.—Income ratios and composition at benefit receipt, by industry of longest job: Total income ratio, percent receiving selected sources, average amount per recipient, and shares of aggregate income ¹

Item	Total	Agriculture, forestry, fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Trade	Finance, insurance, real estate	Service	Public admin. and Armed Forces
Total income ratio:										
Total number	2,463	146	41	167	815	170	395	106	481	130
Total percent	100	100	100	100	100	100	100	100	100	100
Drop: Ratio less than 90	73	53	76	80	82	79	68	76	61	75
Constant: Ratio 90-110	11	12	7	10	8	11	14	8	15	8
Rise: Ratio more than 110	16	36	17	11	10	10	18	16	24	16
Median	66	86	70	62	60	62	71	63	74	71
Percent receiving source:										
Earnings	45	61	23	48	35	31	57	46	52	34
Respondent	40	58	18	39	30	25	53	41	50	26
Spouse	10	12	7	20	9	10	12	10	5	14
Pension income, total	97	96	100	97	97	97	96	95	95	99
Social Security	95	95	100	96	95	95	95	91	94	97
Other pensions	49	15	75	45	58	72	30	62	40	84
Asset income	67	50	68	61	69	68	68	80	66	74
Public welfare	4	12	0	4	3	4	3	1	5	3
Other income ²	9	5	4	9	9	7	9	12	9	9
Average amount per recipient: ³										
Total income	\$15,150	\$13,540	\$18,830	\$14,630	\$14,340	\$16,340	\$13,460	\$21,300	\$14,610	\$21,950
Earnings	5,910	7,700	(4)	6,100	5,510	5,450	5,720	8,980	5,210	7,250
Respondent	5,260	7,220	(4)	4,730	5,000	4,860	5,100	7,330	4,800	6,190
Spouse	5,400	(4)	(4)	5,630	4,640	(4)	4,900	(4)	6,820	(4)
Pension income, total	9,800	5,550	14,110	9,250	10,270	12,270	7,540	11,160	8,900	16,290
Social Security	6,390	5,160	8,040	7,210	7,100	6,850	6,160	6,840	5,350	5,300
Other pensions	6,810	2,900	5,380	4,510	5,600	7,470	4,400	7,040	8,680	13,010
Asset income	4,030	6,210	5,430	3,900	3,090	3,590	3,900	7,700	4,490	4,070
Public welfare	1,900	(4)	...	(4)	1,580	(4)	(4)	(4)	1,450	(4)
Other income ²	2,980	(4)	(4)	(4)	2,480	(4)	3,010	(4)	4,290	(4)
Shares of aggregate income:										
Total percent	100	100	100	100	100	100	100	100	100	100
Earnings	17	35	4	20	14	10	24	19	19	11
Respondent	14	31	4	13	11	7	20	14	16	7
Spouse	4	4	1	8	3	3	4	5	2	4
Pension income, total	62	40	75	62	70	73	54	50	58	73
Social Security	40	36	43	48	47	40	44	29	34	23
Other pensions	22	3	21	14	23	33	10	21	24	50
Asset income	18	23	20	16	15	15	20	29	20	14
Public welfare	1	2	0	0	0	0	1	0	1	1
Other income ²	2	1	1	2	2	1	2	1	3	1

¹ Limited to those first receiving retired-worker benefits in 1969-77. Longest job defined as of 1969 survey.

² Includes State sickness compensation, workers' compensation, unemployment compensation, private welfare or relief, contributions from outside the

household, disability income other than Social Security, and other income.

³ See footnote 3, table 2.

⁴ Not computed; base less than 25 sample cases.

Before benefit receipt, less than one-fourth of the married men were self-employed (not shown in table 7); in the year after benefit receipt, however, 37 percent of those still working were self-employed.⁷ Among non-married women, self-employment was far less prevalent, both before and after benefit receipt, with only 12 percent of those who continued working being self-employed.

Spouse's earnings. Sixteen percent of the wives had earnings after benefit receipt, a considerably smaller proportion than among the husbands. Most worked in salaried occupations rather than in self-employment.

Social Security. Almost all those in the sample were still receiving retired-worker benefits 1-2 years after initial receipt of the benefit. Almost as many wives received retired-worker benefits as spouses' benefits, reflecting the high rate of labor-force participation among

married women in recent years. Among couples without pensions other than Social Security, considerably more wives received spouses' benefits than received retired-worker benefits. This presumably reflects a lower rate of labor-force participation among wives of men not covered by private pensions. Relatively more of their husbands were self-employed before benefit receipt, and the wives may have helped in the family business without remuneration rather than taking paying jobs. Despite differences in receipt, the proportion of aggregate income accounted for by dependents' benefits was the same as that derived from the wives' retired-worker benefits. In all, wives' Social Security benefits accounted for 12 percent of the aggregate, compared with about 25 percent derived from the husbands' own benefits.

Other pension income. Of the couples receiving pension income other than Social Security, three-fourths

⁷ These results accord generally with those in Fuchs, 1980.

Table 7.—Detailed income composition at benefit receipt, by receipt of pension other than Social Security, sex, and marital status ¹

Source of income	Couples			Nonmarried men			Nonmarried women		
	Total	With other pension	Without other pension	Total	With other pension	Without other pension	Total	With other pension	Without other pension
Percent receiving source									
Total percent	100	100	100	100	100	100	100	100	100
Earnings	48	34	63	41	19	58	44	25	54
Respondent	41	26	57	41	18	58	43	24	54
Wage and salary	29	21	38	32	18	43	39	24	47
Self-employment	15	7	23	10	0	17	5	1	7
Spouse	16	13	19	...	...	...	...	...	...
Wage and salary	14	11	16	...	...	...	...	...	...
Self-employment	3	2	3	...	...	...	...	...	...
Pension and asset income	99	100	98	99	100	98	98	100	97
Pension income	97	100	94	98	100	96	94	100	91
Social Security	96	97	94	94	92	96	93	96	91
Retired worker, respondent	88	92	84	84	86	82	84	91	80
Retired worker, spouse	36	42	30	...	...	...	...	...	...
Auxiliary or other, respondent	6	4	8	11	7	14	9	5	11
Auxiliary or other, spouse	44	42	46	...	...	...	...	...	...
Disability, respondent	0	0	0	0	0	0	0	0	0
Disability, spouse	2	2	3	...	...	...	...	...	...
Other pension	53	100	0	42	100	0	36	100	0
Private pension, respondent	36	68	0	28	67	0	20	56	0
Private pension, spouse	5	10	0	...	...	...	...	...	...
Government pension, respondent ²	12	22	0	9	21	0	13	37	0
Government pension, spouse	5	10	0	...	...	...	...	...	...
Military retirement	2	4	0	5	11	0	2	5	0
Railroad retirement	2	4	0	2	4	0	2	4	0
Asset and annuity income	72	79	64	50	64	39	62	78	53
Rent	16	15	18	6	3	8	11	12	10
Interest and dividends	69	77	59	48	64	37	59	75	50
Private insurance and annuity	3	3	3	2	3	2	4	6	2
Public welfare	3	1	5	6	2	9	6	1	10
SSI	2	0	4	1	0	2	3	0	5
Other	1	0	1	5	2	7	3	1	5
Other income	7	6	8	10	5	13	11	8	13
Shares of aggregate income									
Total percent	100	100	100	100	100	100	100	100	100
Earnings	18	9	32	20	5	38	21	7	35
Respondent	13	6	25	20	5	38	20	6	33
Wage and salary	8	4	14	12	5	21	17	6	29
Self-employment	5	1	11	8	0	17	2	0	4
Spouse	5	3	7	...	...	...	...	...	...
Wage and salary	4	3	6	...	...	...	...	...	...
Self-employment	1	1	1	...	...	...	...	...	...
Pension and asset income	80	90	66	78	93	58	76	92	60
Pension income	60	73	41	63	79	43	61	77	45
Social Security	39	38	41	38	35	43	41	37	44
Retired worker, respondent	25	24	26	33	30	36	36	34	38
Retired worker, spouse	6	7	6	...	...	...	...	...	...
Auxiliary or other, respondent	2	1	2	4	2	5	3	2	5
Auxiliary or other, spouse	6	5	6	...	...	...	...	...	...
Disability, respondent	0	0	0	0	0	0	0	0	0
Disability, spouse	0	0	1	...	...	...	...	...	...
Other pension	21	34	0	25	44	0	20	40	0
Private pension, respondent	11	18	0	13	23	0	8	17	0
Private pension, spouse	1	1	0	...	...	...	...	...	...
Government pension, respondent ²	6	9	0	8	14	0	10	19	0
Government pension, spouse	2	3	0	...	...	...	...	...	...
Military retirement	1	2	0	2	4	0	1	1	0
Railroad retirement	1	1	0	1	2	0	1	1	0
Asset and annuity income	20	17	24	13	14	12	14	14	15
Rent	4	2	6	1	0	2	3	2	3
Interest and dividends	16	15	17	12	13	10	11	11	10
Private insurance and annuity	1	0	1	1	1	1	1	1	1
Public welfare	0	0	1	1	0	2	1	0	2
SSI	0	0	0	0	0	0	0	0	1
Other	0	0	0	1	0	2	1	0	1
Other income	2	1	2	2	1	4	2	2	3

¹ Limited to those first receiving retired-worker benefits in 1969-77. Not computed if total income is not available for both years.

² Federal, State, or local government employee pension.

had private employer or union pensions; one-third had Federal, State, or local government pensions; and a small proportion had military or Railroad Retirement pensions (4 percent each). (These numbers add to more than 100 since both husbands and wives may receive pensions, and either may receive more than one.) Because government pensions often substitute for Social Security, they accounted for a much larger share of aggregate income than their incidence indicates: 12 percent, compared with 19 percent from private pensions, a source received by more than twice as many couples.

The relatively few nonmarried women with pensions other than Social Security were much more likely to have government pensions than was the case with married men: 37 percent had such pensions, compared with 22 percent among married men. The respective share of aggregate income accounted for by government pensions was virtually the same as that for private pensions—19 percent and 17 percent, compared with 9 percent and 18 percent among married men. This reflects the progress women have made in obtaining government employment, where workers are almost always covered by pension plans. Far fewer women employed in private industry had pension coverage.

Among those couples who had some form of pension other than Social Security, it was usually the husband who did so: pension receipt of husbands outnumbered that of wives by about 4 to 1. Furthermore, pensions received by wives tended to be smaller, so that only about 15 percent of couples' aggregate pension income came from the wives.

Asset income. About 60–70 percent had asset income. Almost all of these had interest and dividend income, which accounted for 10–15 percent of the aggregate. Also, 10–15 percent had rental income, with a total share of less than 5 percent. Rental income was most prevalent among couples without pensions. Eighteen percent of such couples received it, in amounts that accounted for 6 percent of their aggregate income (compared with only 2 percent among couples with pensions). About 3–4 percent had income from private insurance and annuities, including Individual Retirement Account and Keogh plans. Nonmarried women were somewhat less likely than couples to have asset income (62 percent, compared with 72 percent), and the share of assets in the aggregate was only 14 percent, compared with 20 percent among the couples.

Public welfare. Practically nobody with pensions other than Social Security received welfare income. Among those without second pensions, 5 percent of the married couples had public welfare income (almost exclusively in the form of Supplemental Security Income—SSI), as did 10 percent of the nonmarried women (evenly split between SSI and other public welfare). The share of the aggregate represented by public welfare never exceeded 2 percent.

Other income. Up to 1 person in 10 had other sources of income, but rarely involving large amounts. Their share of the aggregate was around 2 percent.

Income 4 Years After Benefit Receipt

Tables 8–10 provide the first comprehensive longitudinal glimpse at income changes after initial benefit receipt. As explained previously, this is limited to a 4-year time span and to the subset of the RHS cohort that had claimed benefits between 1968 and 1973 and remained in the survey for the full 10 years, 1969–79.⁸ Nevertheless, these figures provide some clues as to income changes during the first few years of benefit receipt, although, of course, not over the entire remaining lifetime. The period during which this cohort entered beneficiary status was characterized by high rates of inflation compared with the postwar norm. For this group, the Consumer Price Index rose by about one-third in the 4 years following benefit receipt.

When the figures are computed in constant dollars, it can be seen that more persons lost ground financially during the period than gained during the period (table 8). The median ratio of income 4 years after benefit receipt to income at benefit receipt was 95; about 40 percent had income ratios of less than 90, compared with 30 percent with ratios of more than 110. No differences by sex and marital status were apparent.

Persons with second pensions were more likely than others to lose a little ground economically in retirement but the change in their income, whether loss or gain, was much less than among those without second pensions. The median income ratio among those with second pensions was 92, indicating about a 10-percent loss over the 4 years, compared with no loss at all among those without such pensions. Detailed inspection shows the income-ratio distribution to be much more concentrated around 100 among those with pensions than among those without. Although half the pensioners had ratios between about 80 and 105 (a 25-percent "interquartile range"), for those without pensions the corresponding figures were about 75 to 130–135 (a 50-percent interquartile range). This indicates that a substantial minority of nonpensioners gained or lost ground—in real terms—in the 4 years following initial benefit receipt. In absolute terms, however, those without pensions were on average still far less well off than the rest, even 4 years after initially entering the rolls.

Table 9 contrasts the composition of total income 4 years after initial benefit receipt with what it was at

⁸ As explained previously, the income year considered "at" benefit receipt could be 1 or 2 years after that event. The 4 years "after" benefit receipt begin with that reference year. For example, for a 1973 beneficiary, income "before" benefit receipt would be measured in 1972, "at" benefit receipt would be 1974, and "4 years after" would be 1978. For a 1972 beneficiary, the three reference years would be 1970 ("before"), 1974 ("at"), and 1978 ("after").

Table 8.—Total income at benefit receipt and income change in the following 4 years, by receipt of pension other than Social Security, sex, and marital status ¹

Item	Couples			Nonmarried men			Nonmarried women		
	Total	With other pension	Without other pension	Total	With other pension	Without other pension	Total	With other pension	Without other pension
Total income at benefit receipt: ²									
Total number	1,987	1,051	936	285	120	165	856	309	547
Total percent	100	100	100	100	100	100	100	100	100
First quartile	\$10,300	\$13,140	\$7,640	\$5,370	\$8,730	\$3,960	\$4,850	\$8,010	\$3,930
Median income	14,880	17,250	11,560	8,570	11,720	6,390	7,730	11,350	6,140
Third quartile	20,910	23,430	17,040	13,270	16,400	9,640	11,900	17,210	8,900
Mean	18,140	21,000	14,920	10,790	14,500	8,100	9,730	13,680	7,490
Ratio of income 4 years after to income at benefit receipt: ³									
Total number	1,049	548	501	222	92	130	618	202	416
Total percent	100	100	100	100	100	100	100	100	100
0.1-19.9	1	0	2	1	1	2	2	1	2
20.0-39.9	2	1	4	3	4	2	3	4	3
40.0-59.9	7	6	8	8	5	9	7	4	9
60.0-79.9	17	19	15	11	10	12	14	13	14
80.0-99.9	29	39	19	33	44	25	32	44	27
100.0-124.9	23	23	23	25	28	22	21	22	20
125.0-149.9	8	5	11	7	3	10	7	4	9
150.0 or more	12	7	18	11	3	17	13	8	16
Drop: Ratio less than 90	42	46	38	39	42	37	40	43	39
Constant: Ratio 90-110	27	33	21	28	39	21	28	37	24
Rise: Ratio more than 110	30	21	41	32	18	42	32	20	37
First quartile	77	79	75	81	82	79	79	81	77
Median ratio	95	92	102	96	93	99	95	93	97
Third quartile	118	107	134	118	106	130	119	106	126
Total income 4 years after benefit receipt: ²									
Median	\$13,290	\$15,700	\$10,160	\$7,590	\$11,000	\$5,810	\$6,550	\$10,100	\$5,490
Mean	15,950	18,790	12,960	9,740	13,660	7,040	8,710	12,190	7,060

¹ Limited to those first receiving retired-worker benefits in 1968-73. Not computed if total income is not available for both years.

² In December 1982 dollars.

³ Total income in first survey year after year benefit receipt (1-2 years after-

ward), compared with income 4 years after that, in constant dollars. For married men, couple's income in nearest year after second spouse received benefits is compared with income 4 years after that.

benefit receipt. About one-fourth of the couples with earnings at initial benefit receipt had stopped working in the subsequent 4-year period and, of those still working, average earnings decreased approximately 20 percent. About the same proportion of wives and husbands had stopped working. Of those still working, however, husbands' average earnings decreased more than 20 percent, compared with virtually no decrease among the wives. The share of earnings in the aggregate decreased from 18 percent to 12 percent. About 40 percent of the nonmarried women stopped working during the 4 years and, of those still working, average earnings decreased by about one-fourth. The share of total income represented by earnings decreased from 21 percent to 10 percent among these women.

At initial benefit receipt, a small proportion of persons had no pension income of any sort; presumably, these were individuals who had returned to work soon after claiming cash benefits. Four years later, virtually everyone received some form of pension income. Thirteen percent of the married couples initially without pensions other than Social Security had them 4 years later, as did 10 percent of the nonmarried women. This change could come about either by persons aging enough to begin collecting pensions (for example, from

the minimum Social Security retirement age of 62 to the more common pensionable age of 65 for other pensions) or by continuing to work long enough to become vested in a pension. The average amount of other pensions decreased somewhat in the 4 years. The reduction was caused partly by a 10-percent decrease in other pension amounts (in real terms) among those initially receiving a pension at benefit receipt and partly by the fact that the new pensioners had comparatively low second pension benefits (30 percent lower, on the average, than the amount payable to those who came onto the benefit rolls with a second pension).

Social Security benefits, on the average, kept pace almost exactly with inflation, as expected.

The proportion of persons with asset income remained constant. The average amount of this income dropped by about 10 percent in real terms among married couples and increased very slightly among nonmarried women.

Among couples, means-tested or public welfare income receipt remained constant, at a very low level; even among those with no pensions other than Social Security, public welfare accounted for only 1 percent of aggregate income 4 years later. The situation was very different for nonmarried men and women, who showed

Table 9.—Composition of total income at and 4 years after benefit receipt, by receipt of pension other than Social Security, sex, and marital status: Percent receiving selected sources, average amount per recipient, and shares of aggregate income¹

Item	Total		With other pension		Without other pension	
	At benefit receipt	4 years after benefit receipt	At benefit receipt	4 years after benefit receipt	At benefit receipt	4 years after benefit receipt
Married couples						
Percent receiving source:						
Total number	1,987	1,084	1,051	557	936	527
Earnings	48	34	34	24	63	46
Respondent	41	30	26	18	57	41
Spouse	16	11	13	10	19	11
Pension income, total	97	99	100	100	94	98
Social Security	96	98	97	98	94	98
Other pensions	53	54	100	94	0	13
Asset income	72	73	79	82	64	64
Public welfare	3	4	1	1	5	8
Other income ²	7	6	6	7	8	6
Average amount per recipient:³						
Total income	\$18,140	\$15,950	\$21,000	\$18,790	\$14,920	\$12,960
Earnings	6,810	5,570	5,700	5,130	7,480	5,810
Respondent	5,880	4,590	4,700	3,480	6,490	5,120
Spouse	5,380	5,240	5,410	5,590	5,350	4,900
Pension income, total	11,280	10,710	15,270	14,130	6,520	7,010
Social Security	7,420	7,180	8,210	7,940	6,500	6,390
Other pensions	7,240	6,420	7,240	6,660	...	4,570
Asset income	4,920	4,360	4,460	3,990	5,570	4,850
Public welfare	2,170	1,490	(4)	(4)	2,230	1,580
Other income ²	4,120	2,580	3,360	2,540	4,840	2,630
Shares of aggregate income:						
Total percent	100	100	100	100	100	100
Earnings	18	12	9	6	32	20
Respondent	13	8	6	3	25	16
Spouse	5	4	3	3	7	4
Pension income, total	60	66	73	75	41	53
Social Security	39	44	38	41	41	48
Other pensions	21	22	34	33	0	4
Asset income	20	20	17	17	24	24
Public welfare	0	0	0	0	1	1
Other income ²	2	1	1	1	2	1
Nonmarried men						
Percent receiving source:						
Total number	285	231	120	94	165	137
Earnings	41	26	19	10	58	36
Pension income, total	98	98	100	100	96	97
Social Security	94	97	92	97	96	97
Other pensions	42	43	100	92	0	10
Asset income	50	56	64	68	39	47
Public welfare	6	12	2	0	9	20
Other income ²	10	8	5	4	13	11
Average amount per recipient:³						
Total income	\$10,790	\$9,740	\$14,500	\$13,660	\$8,100	\$7,040
Earnings	5,120	3,440	3,910	4,170	5,410	3,300
Pension income, total	7,020	6,940	11,460	10,870	3,640	4,160
Social Security	4,370	4,370	5,420	5,210	3,640	3,790
Other pensions	6,450	5,980	6,450	6,360	...	3,420
Asset income	2,910	2,910	3,230	3,180	2,530	2,640
Public welfare	(4)	1,510	(4)	(4)	(4)	1,510
Other income ²	2,700	(4)	(4)	(4)	(4)	(4)
Shares of aggregate income:						
Total percent	100	100	100	100	100	100
Earnings	20	9	5	3	38	17
Pension income, total	63	70	79	80	43	57
Social Security	38	44	35	37	43	52
Other pensions	25	26	44	43	0	5
Asset income	13	17	14	16	12	18
Public welfare	1	2	0	0	2	4
Other income ²	2	2	1	2	4	3

See foot notes at end of table.

Table 9.—Composition of total income at and 4 years after benefit receipt, by receipt of pension other than Social Security, sex, and marital status: Percent receiving selected sources, average amount per recipient, and shares of aggregate income ¹—Continued

Item	Total		With other pension		Without other pension	
	At benefit receipt	4 years after benefit receipt	At benefit receipt	4 years after benefit receipt	At benefit receipt	4 years after benefit receipt
Nonmarried women						
Percent receiving source:						
Total number	856	638	309	205	547	433
Earnings	44	27	25	11	54	34
Pension income, total	94	98	100	100	91	98
Social Security	93	97	96	96	91	98
Other pensions	36	36	100	91	0	10
Asset income	62	60	78	76	53	53
Public welfare	6	17	1	1	10	24
Other income ²	11	7	8	4	13	9
Average amount per recipient: ³						
Total income	\$9,730	\$8,710	\$13,680	\$12,190	\$7,490	\$7,060
Earnings	4,630	3,420	3,880	2,530	4,830	3,560
Pension income, total	6,300	6,040	10,550	9,700	3,670	4,270
Social Security	4,260	4,310	5,280	5,220	3,650	3,890
Other pensions	5,460	4,780	5,460	5,040	...	3,620
Asset income	2,270	2,420	2,470	2,870	2,110	2,120
Public welfare	1,680	1,540	(4)	(4)	1,670	1,570
Other income ²	2,050	1,870	2,560	(4)	1,860	1,890
Shares of aggregate income:						
Total percent	100	100	100	100	100	100
Earnings	21	10	7	2	35	17
Pension income, total	61	68	77	79	45	59
Social Security	41	48	37	41	44	54
Other pensions	20	20	40	38	0	5
Asset income	14	17	14	18	15	16
Public welfare	1	3	0	0	2	5
Other income ²	2	2	2	1	3	2

¹ Limited to those first receiving retired-worker benefits in 1968-73. Not computed if total income is not available at each time period. Pension receipt is as of benefit receipt. See footnote 3, table 8.

² Includes State sickness compensation, workers' compensation, unemployment

compensation, private welfare or relief, contributions from outside the household, disability income other than Social Security, and other income.

³ See footnote 3, table 2.

⁴ Not computed; base less than 25 sample cases.

sharp increases in the receipt of means-tested income, primarily Supplemental Security Income (SSI). Among nonmarried women, the proportion receiving such income increased from 6 percent at initial benefit receipt to 17 percent 4 years later (representing 1 percent and 3 percent of aggregate income at these two time periods, respectively). Virtually no nonmarried women with a pension other than Social Security received means-tested or public welfare income, either at or after initial benefit receipt. Among those who had no such pensions, receipt of such income increased from 10 percent to 24 percent, and its share of aggregate income went from 2 percent to 5 percent. Nearly all of this increase was due to SSI payments. Thus, there was a small group of nonmarried women whose income situation worsened during the first 4 years of retirement, or who became old enough (age 65) to receive SSI, or who became aware of SSI's availability during this period. (SSI payments began in 1974, so most of this sample was able to collect these benefits 4 years after entering the benefit rolls, although some may not have been able to collect them at initial benefit receipt.)

The proportion receiving income from other sources

remained approximately constant during the first 4 years on the benefit rolls among married couples and nonmarried men, and decreased somewhat among nonmarried women. At neither time period did other income account for more than 2 percent of the aggregate.

Chart 2 summarizes changes in income composition from before initial entitlement, to entitlement, to 4 years afterward. Its principal feature is the continued reduction of earnings as a source of income over the three time periods.

The preceding tables are essentially cross-sectional in nature; they show income sources and amounts at two separate points in time. Changes in income sources and amounts for selected sources are shown longitudinally in table 10. For a given individual, it shows whether income from a particular source was received at the time of initial benefit receipt, 4 years later, or in both years. It also shows how the amount changed during the interval for those receiving it in both years. For simplicity, the table is not categorized by sex, marital status, or pension receipt.

Earnings were a moderately common source of income immediately after benefit receipt, but declined

considerably in the 4 subsequent years. Of the total, half did not have any earnings in either year. These persons could be thought of as "completely" retired at the time of their entry onto the Social Security benefit rolls, as their subsequent re-entry into the labor force is rather unlikely. Twenty-five percent had earnings in both years, 20 percent stopped working during the interval, and 5 percent started working again after beginning to receive Social Security benefits. Put another way, of those working right after benefit receipt (45 percent of the total), almost half stopped work during the 4-year interval. About 10 percent of those not working right after benefit receipt had earnings 4 years later. Thus, complete retirement (defined as the total absence of earned income) characterized half the sample right after benefit receipt, and 4 years later two-thirds were completely retired. Among those working in both years, decreases in real earnings were the norm, probably as a result of fewer hours worked. The median earnings ratio was 78, indicating a decrease of more than 20 percent in real earnings. Looked at another way, 57 percent had declining real earnings (ratio under 90), while 44 percent had constant or increasing earnings (ratio 90 or above).

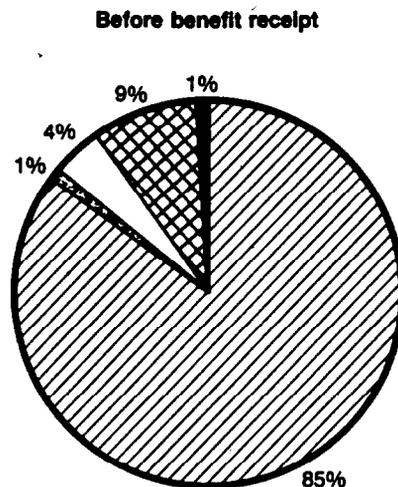
Social Security benefits were being received 4 years following initial benefit receipt by 95 percent of those in this group. A small number of persons (4 percent) initially receiving these benefits did not report them 4 years later, and about the same number (6 percent) had benefits 4 years after benefit receipt, but not immediately thereafter.⁹ Of the 9 in 10 persons who had Social Security benefits in both years, stability with respect to the cost of living was the norm. Fifty-two percent reported virtually constant benefits over the period (ratio 90-110), while 33 percent had a rise in real benefits (usually very slight) and 15 percent experienced a drop (also usually slight).¹⁰ This stability is, of course, expected of an income source that since 1973 has been formally indexed to the Consumer Price Index.

Pension income other than Social Security showed a considerable decline in the 4-year period. This was especially true of private employer or union pensions, where the median ratio indicated over a 20-percent real decline in the period. For private pensioners the distribution was very narrow, and half the recipients had ratios between 72 and 89; practically none had pension increases. For the smaller number of persons with government employee pensions the picture was far brighter, with a median loss of 10 percent. Half the government pensioners experienced some loss, mostly slight, while the other half received constant or rising pension amounts.

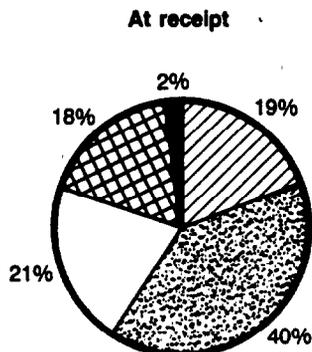
⁹ Reporting error may account for some of this starting and stopping; these survey figures were not checked against SSA's benefit records. Also, as noted earlier, some beneficiaries may have had their benefits suspended soon after the award, in order to return to work. Such suspensions were especially prevalent among nonmarried women without pensions other than Social Security.

¹⁰ Reporting error is suspected for the more extreme changes.

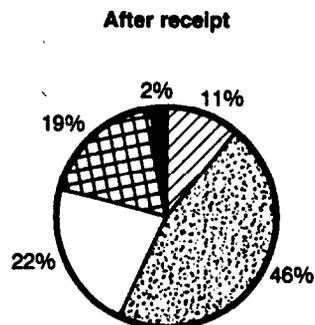
Chart 2.—Income shares before, at, and 4 years after benefit receipt



(Average: \$24,000)



(Average: \$15,200)



(Average: \$12,800)



Table 10.—Change in selected income sources in the 4 years following benefit receipt: Earnings, Social Security, pensions other than Social Security, and asset income

Item	Earnings	Social Security	Pensions other than Social Security			Asset income
			Total	Private	Government ¹	
Total number ²	2,100	2,136	³ 2,133	...	...	1,990
Total percent	100	100	100	...	...	100
Source not received either year	50	1	51	...	...	26
Source started by later year	5	6	6	...	...	12
Source stopped by later year	20	4	3	...	...	8
Source reported both years	25	89	40	...	...	54
With source in both years, income ratio: ⁴						
Total number	535	1,899	848	549	199	1,066
Total percent	100	100	100	100	100	100
0.1-19.9	11	1	2	2	0	6
20.0-39.9	12	0	2	3	0	9
40.0-59.9	12	2	6	6	3	9
60.0-79.9	17	6	40	49	25	13
80.0-99.9	12	38	29	26	30	12
100.0-124.9	13	36	13	7	25	14
125.0-149.9	9	6	4	3	8	7
150.0 or more	15	12	5	4	9	30
Drop: Ratio under 90	57	15	68	78	50	43
Constant: Ratio 90-110	14	52	17	13	22	12
Rise: Ratio over 110	30	33	15	10	28	45
First quartile	44	93	73	72	79	61
Median ratio	78	102	80	78	90	102
Third quartile	121	118	97	89	114	170

¹ Federal, State, or local government employee pension.

² Restricted to those who claimed retired-worker benefits in 1968-73 and who reported fully on income sources.

³ Includes small number with military retirement (24), Railroad Retirement

(25), or several pensions (51), not tabulated separately.

⁴ Income amount 4 years after benefit receipt divided by amount at benefit receipt, in constant dollars. See footnote 3, table 8.

If government pensions could be seen in greater detail, it would be expected that recipients of Federal Civil Service pensions would fare better after benefit receipt than those with State or local government pensions, many of which are incompletely indexed for inflation.¹¹

The net effect of declining real pension values on total income is much less serious than these figures imply, because these pensions are generally only one of several sources of income after benefit receipt. As was shown in table 9, even for those with pensions other than Social Security, other income sources accounted for about two-thirds of aggregate income, and these other income sources usually did not decline as much. Furthermore, an individual faced with seriously eroding total income may take protective steps such as increasing asset income by converting assets to income-bearing form, or increasing work effort.

Asset income displayed a great deal of instability during the 4-year period. Of those with asset income in both years, 40 percent had decreasing amounts relative to the Consumer Price Index (ratio under 90), while 60 percent had constant or increasing amounts. The detailed distribution reveals the full extent of instability. Although the median ratio was 102, one-fourth saw asset income drop by almost 40 percent, and another fourth had it rise by 70 percent or more. Actual instability in amounts

received and survey response errors probably both contribute to these findings.

Comparisons With Other Research

Detailed tabulations of the income of the elderly are available every other year, based on the Current Population Survey (CPS) of the Bureau of the Census. The latest article tabulates 1982 data (Grad, 1984). It is possible to roughly approximate income ratios by using Grad's total income figures for Social Security beneficiaries and nonbeneficiaries. The samples and methodology are very different, however, making precise comparisons impossible. For example, this article is restricted to persons receiving Social Security retired-worker benefits, who remained in the survey for a full 10 years. It therefore analyzes a somewhat healthier group than that in Grad's study, which includes disabled-worker beneficiaries. Additionally, income ratios shown here compare before- and after-benefit income of the same person, while Grad's data for beneficiaries and nonbeneficiaries are, of necessity, for different persons.

Absolute income levels are somewhat different than those found in the CPS (Grad, 1984, table 13). Sampling and methodological differences, in addition to those described above, account for these discrepancies. Although figures presented in this article are in

¹¹ These results are consistent with an earlier analysis of private pension changes over the period 1970-74 (Thompson, 1978).

1982 dollars, in fact they reflect income as far back as 1968, inflated by the Consumer Price Index. This procedure is rough, however, as it fails to account for age-specific increases in earnings over a period as long as about 10 years. Additionally, about 5 percent more married women were working in 1982 than a decade earlier (Waldman, 1983, table 2). For all these reasons the absolute income figures shown in this article should only be considered indicative of general patterns (such as those between the marital status and pension receipt categories).

Receipt of individual income sources also differs between the two articles. For example, this article shows a higher proportion receiving earned income before benefit receipt than does Grad's—again, mostly because of its exclusion of persons receiving disabled-worker benefits.

One may also compare data in this article with another family of income-change measures, the earnings-replacement rate. A replacement rate compares retirement benefits with some definition of pre-benefit earnings (for example, Social Security retired-worker benefits plus, if applicable, other pension benefits, as a proportion of earnings in the highest 3 years of the last 10, not indexed for inflation). This definition yields median 1976 replacement rates under 60 percent (Fox, 1982, table 5). Total income ratios do not indicate as severe a drop in living standards, in large part because they include earnings and asset income after benefit receipt; median income ratios are 65 for married couples (compared with a median replacement rate of 58 percent) and 76 for nonmarried women (compared with 55 percent).

An earlier article using data from the Retirement History Study presented some preliminary figures on total income and income ratios, based on unedited data (Fox, 1982, table 11). Those figures, once adjusted to 1982 levels, are very similar to those appearing in this article.

Summary and Conclusions

This article presents a picture of the changes in living standards that accompany Social Security benefit receipt and occur in the first few years thereafter. Retirement is a complex process. About 1 person in 2 makes an immediate transition from full-time work to complete leisure. For the rest, retirement is a gradual process, characterized by stages: receipt of Social Security benefits in conjunction with relatively small amounts of earned income, then a gradual cessation of work activity. With its analysis of income sources just after initial benefit receipt and in the subsequent 4 years, this article illustrates some of the complexity of the first few years of the retirement process. This is the first comprehensive view of the process of retirement, for a given group of retirees, and is made possible by the existence of a 10-

year longitudinal study of persons entering their retirement years during the 1970's.

The effects of inflation on this cohort are studied. During the 4 years following benefit receipt the Consumer Price Index increased on average by about one-third, approximately three times as rapidly as the postwar norm. Of particular interest is what happened to the income of persons with pensions other than Social Security, as many such pensions are imperfectly protected against inflation, if at all.

Changes at Initial Benefit Receipt

— Married couples had the highest levels of preretirement income but incurred the greatest decrease in income upon entering the benefit rolls. In real terms, couples lost about a third of their preretirement income (a median of \$24,000). Nonmarried women started lower, at \$11,000, but lost only a fourth of their income.

— Persons with pensions other than Social Security had considerably higher previous incomes than those without them—one-third higher for married couples, 85 percent higher for nonmarried women. Married couples lost about as much income whether or not they had second pensions, while nonmarried women with such pensions lost more.

— Income composition changed considerably, from almost exclusive reliance on earnings to a mixture of sources, dominated by Social Security and other pension income. For married couples, Social Security and other pension income accounted for 60 percent of aggregate income, while asset income and earnings each accounted for a 20-percent share. For nonmarried women the importance of asset income was fractionally lower than for couples, and that of earnings greater.

— Close to half had earned income 1 or 2 years after benefit receipt, though in amounts that were only a fraction of their previous levels.

— Twice as many beneficiaries without pensions other than Social Security worked after claiming benefits as did those with pensions, and they earned more on the average. This finding lends credence to the adage that "work is the poor man's pension"—many of these persons continued to work out of economic necessity. Also explaining the continued work among those without other pensions is the fact that, with generally lower previous earnings, more such persons could continue to work without their earnings causing the Social Security earnings test to eliminate their benefits. This post-benefit work accounts for the fact that, although pensioners have higher total pension benefits relative to previous earnings, the drop in their total income was about the same.

— Persons with low previous income experienced less of a decline in their total income than did those with higher initial income. This finding reflects the progres-

sive structure of Social Security benefits and the greater propensity of low-income beneficiaries to continue working.

— At the high end of the income scale, non-Social Security pensions were very common, as was asset income.

— When categorized by occupation and industry, income ratios and composition generally follow from the income levels, tenure, and pension coverage associated with each.

— Self-employment is relatively common as a source of post-benefit earnings among men. Few women, whether nonmarried or the wives of sampled men, were self-employed either before or after first receiving benefits.

— Almost as many wives received retired-worker benefits as received spouses' benefits, reflecting the high rate of labor-force participation among women recently entering the rolls.

— About three-fourths of all non-Social Security pensions were from private employers or unions. The remainder were mostly Federal, State, or local government pensions, plus a small number of military and railroad pensions. In most cases, it was the husband who had the pension, not the wife. The few wives with pensions usually received only small amounts. Government employee pensions were heavily represented among the few nonmarried women with non-Social Security pensions.

— Asset income consisted primarily of interest and dividends, with rental income a distant second except among couples without pensions other than Social Security. The proceeds of private insurance and annuities were almost never received.

— Public welfare, usually in the form of SSI, was received by about 10 percent of the nonmarried women. Amounts received were small, however, so even in this group the share of the aggregate was only 2 percent.

— Other income was received by about 10 percent of the sample. Employment-related compensation (unemployment compensation, sickness benefits, and workers' compensation) were most common among married couples, particularly right after benefit receipt, while welfare-type sources (private welfare or relief, or contributions from outside the household) were more common among nonmarried women.

Changes in the 4 Years After Benefit Receipt

— Four years after initially receiving benefits, the total income of the beneficiaries had fallen further in relation to prices than it already had at initial receipt. The average beneficiary saw real income deteriorate about 10 percent during the 4-year period. By that time, mean income had fallen to 56 percent of its preretirement level for married couples and to 63 percent for nonmarried women. Mean income decreased somewhat more in the

4-year span than did median income, indicating a decrease in the number of persons with very high incomes.

— Persons with pensions other than Social Security lost ground during their first 4 years on the rolls while those without pensions stayed about even. This was primarily due to considerable declines—averaging 20 percent—in the real value of private pensions. Government pensions held up better under the inflation rates of the 1970's. Because most pension recipients had other, better-protected sources of income, their total income decreased by under 10 percent, however.

— Although half the married couples had some earned income when they initially received benefits, 4 years later only about a third were still working. Of those still working, the average amount of earnings had declined by one-fifth. Even more nonmarried women stopped working during these 4 years. A very small number returned to work during the 4-year interval.

— Social Security benefits kept pace with inflation.

— Asset income was very unstable during the period. Although on the average it remained constant, a great many persons experienced considerable increases or decreases in this income source. Some of this variability may be caused by reporting error.

Technical Note

The Sample

The sampling frame for the Retirement History Study is the same as that used by the Bureau of the Census for its Current Population Survey (CPS).¹² The sample was composed of persons living in households that had last participated in the CPS before February 1969. Included were men in all marital status categories and women who, at the time of sample selection, had no husband in the household. In any month the CPS panel consists of eight groups of households selected up to 18 months previously. The oldest of these rotation groups is dropped and replaced by a new one each month.

Nineteen of these discontinued CPS rotation groups were used for the RHS. Bureau of the Census interviewers gathered information from members of the sample and their spouses, usually in late spring of the survey year.

Sampling Variability

A measure of the sampling variability of an estimate is given by the standard error of the estimate. Generally speaking, the chances are about 68 out of 100 that an estimate will differ from the value given by a complete

¹² For a general description of the CPS, see Bureau of the Census, *The Current Population Survey—Design and Methodology* (Technical Paper No. 40), 1978. See also Marvin M. Thompson and Gary Shapiro, "The Current Population Survey: An Overview," *Annals of Economic and Social Measurement*, April 1973.

census by less than one standard error. The chances are about 95 out of 100 that the difference will be less than twice the standard error.

Table I gives approximate standard errors for the estimated percentage of individuals with a certain characteristic. Linear interpolation may be used to obtain values not specifically given. To derive standard errors applicable to a wide variety of items, a number of assumptions and approximations were required. As a result, these standard errors provide an indication of the order of magnitude rather than the precise standard error for any specific item.

To make a rough determination of the statistical significance of the difference between two independent percentages, the following procedure may be used. Find estimates of the standard errors of the percentages in question, using table I. Square these standard errors to get variances and add the variances. Take the square root of this sum to get the standard error of the difference. If the absolute difference between the two percentages in question is greater than twice the standard error of the difference, they are said to be significantly different from one another at the 5-percent level.

The percentiles of a variable's distribution are values below which a percentage of units of the sample lies. In particular, the 50th percentile is known as the median, and the 25th, 50th, and 75th percentiles are known as quartiles of the distribution. Estimates of these values are subject to sampling variability that may be estimated in the following way and used to calculate confidence intervals for the percentiles in question:

- (1) Using the appropriate base, determine from table I the standard error of the percentile in question—the standard error of a 50-percent characteristic, for example.
- (2) For 95-percent confidence limits, add to and subtract from the desired percentile twice the standard error found in step 1.
- (3) On the cumulated distribution of the variable in question, use linear interpolation to find the values that correspond to the limits in step 2. These values are 95-percent confidence limits for the percentile.

Income Editing

The income data initially contained a great deal of nonresponse (running upwards of 40 percent for 2-year comparisons). For persons remaining in the survey through 1979—about 60 percent of the initial sample—income data were longitudinally edited using a variety of techniques. This process reduced nonresponse on total income from an average of about 25 percent to about 7 percent in any single survey.

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Table I.—Approximate standard errors of estimated percentages

Size of base	Estimated percentage									
	2 or 98	5 or 95	8 or 92	10 or 90	15 or 85	20 or 80	25 or 75	30 or 70	40 or 60	50
25	3.1	4.8	6.0	6.6	7.8	8.8	9.5	10.0	10.8	11.0
50	2.2	3.4	4.2	4.7	5.6	6.2	6.7	7.1	7.6	7.8
100	1.5	2.4	3.0	3.3	3.9	4.4	4.8	5.0	5.4	5.5
200	1.1	1.7	2.1	2.3	2.8	3.1	3.4	3.6	3.8	3.9
300	.9	1.4	1.7	1.9	2.3	2.5	2.8	2.9	3.1	3.2
500	.7	1.1	1.3	1.5	1.8	2.0	2.1	2.2	2.4	2.4
800	.5	.8	1.0	1.2	1.4	1.6	1.7	1.8	1.9	1.9
1,500	.4	.6	.8	.8	1.0	1.1	1.2	1.3	1.4	1.4
3,000	.3	.4	.5	.6	.7	.8	.9	.9	1.0	1.0
5,000	.2	.3	.4	.5	.6	.6	.7	.7	.8	.8
8,000	.2	.3	.3	.4	.4	.5	.5	.6	.6	.6
10,000	.2	.2	.3	.3	.4	.4	.5	.5	.5	.6