

# Work Status and Income Change, 1968-72: Retirement History Study Preview

by ALAN FOX\*

*In 1973, 4 years after baseline interviews were conducted for the Retirement History Study, sample members were reinterviewed to measure variations in selected characteristics. This article analyzes income change for persons who had stopped working, were continuing to work, or had not been employed in 1969. Of those who had stopped working, substantially more married men than non-married men or women reported pensions other than social security benefits. The proportionate drop in constant dollar income was about the same for all—40-45 percent—though initial incomes were far higher for persons with other pensions. Social security benefits alone were insufficient to maintain income above a low level, especially for nonmarried women, many of whom had no other source. Persons not employed over the entire period experienced a rise in their initially very low incomes, probably as a result of social security benefit increases. The income of persons who remained employed through 1972 kept pace with living costs*

RETIREMENT involves many changes in an individual's way of life. Among the most important is the shift in the primary source of income from earnings to various forms of retirement income. Generally, retirement income is lower than pre-retirement income, and for many persons it is much lower.

To measure the extent of income change and other factors associated with retirement, the Social Security Administration's longitudinal Retirement History Study (RHS) is following a national sample of men and women from near the end of their working lives in 1969, when they were aged 58-63, through their first several years of retirement. This article provides a glimpse at the income status of RHS respondents from the first to the third biennial interviews, conducted in 1969 and 1973. Both income level and change are analyzed, and special attention is directed to the changing income situation of couples or individuals who stopped working between 1968 and 1972. Persons in the sample who remained em-

ployed through 1972 or who were not working in 1968 are discussed separately.

Some of the shifts that accompany aging and retirement have been examined in previous BULLETIN articles.<sup>1</sup> A companion article in this issue provides a brief, preliminary analysis of work history, health, family life, and living arrangements of the RHS interviewees.<sup>2</sup> More detailed analyses of these and other characteristics of the respondents—including income—will follow. Future waves of RHS interviews will provide greater insight into the situation of Americans of this birth cohort after they retire. By the end of the project, data on persons up to age 73 and retired for as long as 10 years will be available.

## SCOPE OF THE SURVEY

The survey population is divided into four marital status groups. These classifications cover married men and their wives, nonmarried men, nonmarried women, and surviving spouses.

*Married men and their wives* constitute the largest group, accounting for almost 60 percent of the sample. Though the total money income of couples is measured, only husbands' employment and pension receipt are used for classification purposes in this preliminary report. (Married women were not sampled separately because interviews conducted before the study began revealed that for most such women retirement was defined in terms of their husbands' labor-force withdrawal rather than their own.)

*Nonmarried men* make up a small group—only about 10 percent of the sample. The members of this group

<sup>1</sup> See Lola M. Irelan, "Retirement History Study Introduction," November 1972; Dena K. Motley, "Health in the Years Before Retirement," December 1972, and "Paying for Health Care in the Years Before Retirement," April 1975; Janet Murray, "Family Structure in the Years Before Retirement," October 1973, and "Activities and Expenditures of Preretirees," August 1975; Karen Schwab, "Early Labor-Force Withdrawal of Men Participants and Nonparticipants Aged 58-63," August 1974; Sally R. Sherman, "Assets on the Threshold of Retirement," August 1973, and "Labor Force Status of Nonmarried Women on the Threshold of Retirement," September 1974.

<sup>2</sup> Kathleen Bond, "Reviewing the First Four Years of the Retirement History Study," pages 3-14 of this issue.

\* Division of Retirement and Survivor Studies, Office of Research and Statistics

are not nearly as well off economically as their married counterparts

*Nonmarried women* constitute approximately one-fourth of the sample. They are in an even worse economic situation than are nonmarried men.

*Surviving spouses* are widows of married men respondents who died some time between the 1969 and 1973 interviews. Though it is growing in size, this group currently contains only a small number of persons and their characteristics generally are not tabulated in this article.

To obtain a brief look at the income situation

in 1968 and 1972, a simple income transition matrix was used (table 1). As might be expected, this table indicates a considerable amount of shifting in the income distribution between the two years. Married men were more likely than nonmarried persons to move from one income category to another during the period. They were also more evenly scattered throughout the income distribution, while nonmarried persons were concentrated at the low end.

Several factors help account for these shifts

TABLE 1—Total money income, 1972, and comparison of income categories, by total money income, 1968 (in current dollars). Percentage distribution of respondents, by marital status and sex<sup>1</sup>

Total money income, 1972, and comparison of income categories	Total money income, 1968							
	Total	Less than \$2,500	\$2,500-4,999	\$5,000-7,499	\$7,500-9,999	\$10,000-14,999	\$15,000-19,999	\$20,000 or more
<b>Married men and spouses</b>								
Total number	3,316							
Total percent <sup>2</sup>	100	9	16	22	20	21	7	6
Less than \$2,500	8	4	2	1	1	0	0	0
2,500-4,999	18	3	7	4	2	1	0	0
5,000-7,499	20	1	4	7	5	3	0	0
7,500-9,999	17	0	2	6	5	4	1	1
10,000-14,999	20	0	1	3	7	8	1	1
15,000-19,999	9	0	0	1	1	5	8	1
20,000 or more	9	0	0	0	0	2	2	4
Category in 1972								
Lower than 1968	27		15	24	35	34	40	39
Same as 1968	35	43	44	32	23	36	25	61
Higher than 1968	38	58	41	44	42	30	35	
<b>Nonmarried men</b>								
Total number	628							
Total percent <sup>2</sup>	100	31	22	19	14	10	2	2
Less than \$2,500	28	20	4	1	1	1	0	0
2,500-4,999	30	9	10	7	4	2	0	0
5,000-7,499	19	2	6	5	3	2	0	0
7,500-9,999	9	0	2	4	3	1	0	0
10,000-14,999	8	0	0	2	3	3	1	0
15,000-19,999	4	0	0	0	1	2	1	0
20,000 or more	2	0	0	0	0	0	1	1
Category in 1972								
Lower than 1968	26		20	40	55	54	( <sup>3</sup> )	( <sup>3</sup> )
Same as 1968	42	65	44	29	18	20	( <sup>3</sup> )	( <sup>3</sup> )
Higher than 1968	31	35	36	31	27	22	( <sup>3</sup> )	( <sup>3</sup> )
<b>Nonmarried women</b>								
Total number	1,680							
Total percent <sup>2</sup>	100	47	28	15	6	4	0	0
Less than \$2,500	43	54	8	1	0	0	0	0
2,500-4,999	28	11	15	3	1	0	0	0
5,000-7,499	15	1	6	6	1	0	0	0
7,500-9,999	7	0	1	4	1	0	0	0
10,000-14,999	6	0	0	1	2	2	0	0
15,000-19,999	1	0	0	0	0	1	0	0
20,000 or more	1	0	0	0	0	0	0	0
Category in 1972								
Lower than 1968	15		27	25	30	23	( <sup>3</sup> )	( <sup>3</sup> )
Same as 1968	57	74	46	39	24	52	( <sup>3</sup> )	( <sup>3</sup> )
Higher than 1968	28	26	26	30	40	25	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> Persons or couples reporting fully on all income sources in both 1968 and 1972. "Less than \$2,500" includes a small number with zero or negative reported total income. Excludes 279 surviving spouses. Figures in italics represent identical income categories for 1968 and 1972.

<sup>2</sup> For 1972 total money income, expressed as percentages of total number.

For comparison of income categories "total" column represents percentages of total number; other columns, percentages of column totals.

<sup>3</sup> Based on less than 100 cases.

<sup>4</sup> Not shown; base less than 25.

First, for a substantial proportion of the sample, employment status changed between the two years, in most cases from full-year work to complete retirement. Second, persons who remained employed probably benefited from the fact that earnings generally rise with the cost of living. Third, those out of the labor force in 1968 may have benefited either from beginning to collect social security benefits by 1972 or, if they already were receiving benefits in 1968, from the considerable benefit increases that were legislated within the period.<sup>3</sup> Since this transition matrix is expressed in current dollars, such changes create movement across class boundaries. Finally, income amounts may have been incorrectly reported in either or both years.

Since income level and change are heavily influenced by employment changes, all the remaining tables in this article are classified by means of a simple three-way employment-status variable. The first group contains persons with earnings in both 1968 and 1972 who reported that they were employed during the survey weeks in 1969 and 1973, such persons are termed "employed in both years."<sup>4</sup> Members of the second group had earnings in 1968 and were employed in 1969 but reported no earnings in 1972 and were not employed in 1973, these persons are identified as "employed in 1968, not in 1972." Those in the third group, "not employed in either year," had no earnings in either year and were not employed in either survey week.

The principal group omitted under this three-way classification consists of persons moving from work to retirement during 1968-69 or 1972-73. Persons who stopped working at some time during 1972, for example, would have reported some earnings for 1972 but would not have been employed during the 1973 survey week. Such persons were omitted from the discussion because income data were collected for the entire calendar

<sup>3</sup> For the entire year 1972, benefits averaged about 35 percent higher than they did in 1968, at the end of 1972, they were approximately 52 percent higher. Respondents might tend to report benefits current at the time of the survey, which would overstate actual benefits received during the preceding income year. A check against actual benefits reported in the Social Security Administration's administrative records is planned.

<sup>4</sup> Information was requested on income in the calendar year preceding the interview (1968 and 1972) and on employment status as of the week before the interview (early in 1969 and 1973).

year 1972, and midyear retirement would result in a mixture of income sources and an improper comparison with 1968 income. Twenty-seven percent of the sample was not included in the three-way classification.

This study calculates total money income for the sample person or, if married, the couple. Total money income does not measure other aspects of "economic welfare," including such non-cash items as public housing and food stamps, fringe benefits, taxes paid, and the value of leisure time.<sup>5</sup>

## EMPLOYMENT STATUS

Persons in the RHS sample were aged 62-67 in 1973. Thus, by the 1972 income year, nearly all the respondents were old enough to receive social security benefits. Of those who reported income in both years, 18 percent were working in 1968 but not in 1972 and an additional 15 percent were not employed in either year, as shown below. Of

Employment status	Total <sup>1</sup>	Married men	Non married men	Non married women
Total number reporting income in 1968 and 1972	5 905	3 317	628	1 681
Total percent . . . . .	100	100	100	100
Employed in—				
1968 and 1972 . . . . .	40	47	38	31
1968 but not in 1972 . . . . .	18	19	18	15
Neither year . . . . .	15	8	16	30
Other	27	26	28	24
1968-69 retirees <sup>2</sup> . . . . .	5	4	7	6
1972-73 retirees <sup>3</sup> . . . . .	15	18	14	11
All other patterns . . . . .	7	4	7	7

<sup>1</sup> Includes 279 surviving spouses.  
<sup>2</sup> Persons with earnings in 1968 but not employed in survey week, 1969 and with no earnings or employment in 1972-73.  
<sup>3</sup> Persons with earnings in 1968 and employed in survey week, 1969 who reported some earnings in 1972 but were not employed in survey week 1973.

particular interest is the fact that 30 percent of the nonmarried women were not employed in either year—a proportion twice as large as that for nonmarried men and four times as large as that for married men.

This tabulation also shows that 15 percent of the respondents were employed in 1968 and reported earnings in 1972 but were not employed

<sup>5</sup> See Federal Interagency Committee on Education, Subcommittee on Education for the Disadvantaged and Minorities, *The Measure of Poverty*, Department of Health, Education, and Welfare, April 1976, and Technical Paper VII of that study.

during the 1973 survey week. These persons, termed for simplicity "1972-73 retirees," are excluded from the income comparisons, as are the "1968-69 retirees," a group that accounted for 5 percent of the total.

### Pension Receipt

In the discussion that follows, "social security" means all forms of social security benefits included on the questionnaire for both respondent and spouse—retired-worker, disabled-worker, and survivor benefits. The three types of benefits were reported separately, but preliminary comparisons of survey responses with information from internal records has revealed considerable misreporting by type A match of RHS sample data is being made against the Social Security Administration's benefit records, which will be used for future analyses of benefit types. "Other pensions" lumps together the amounts received by respondent and spouse from private employer or union pensions, Federal, State, or local employee pensions, railroad retirement, and military retirement pensions.

Substantial differences were found to exist among employment-status groups in the type of pension reported. Within each group, the type also varied substantially by sex and marital status.

*Those employed in both years*—As might be expected, a majority of persons in this group reported no pension of any kind (table 2). About a third of the nonmarried women, however, reported receiving social security benefits, compared with about a fifth of the men. This difference could result from lower earnings or more part-time work among women, which would more easily allow a combination of continued work and benefit receipt. About 10 percent of the men reported receiving pensions other than social security benefits, compared with 5 percent of the women.

*Those who stopped working*—Of those who stopped working between 1968 and 1972, 57 percent of the nonmarried women reported receiving only social security benefits in 1972, compared with less than 40 percent of their male counterparts. Thirty-five percent of the women reported a pension other than social security benefits,

TABLE 2—Pension status, 1972, by employment status, 1968 and 1972. Number and percentage distribution of respondents, by marital status and sex<sup>1</sup>

Pension status, 1972	Employed in 1968 and 1972	Employed in 1968 but not in 1972	Not employed in 1968 or 1972
Married men and spouses			
Total number reporting total income, 1968 and 1972	1,562	618	257
Total percent	100	100	100
No pension	67	4	10
Social security only <sup>2</sup>	22	38	48
Social security and other pension <sup>3</sup>	6	52	37
Other pension only <sup>3</sup>	5	8	5
Nonmarried men			
Total number reporting total income, 1968 and 1972	237	115	102
Total percent	100	100	100
No pension	71	12	18
Social security only <sup>2</sup>	20	37	52
Social security and other pension <sup>3</sup>	3	43	22
Other pension only <sup>3</sup>	5	8	9
Nonmarried women			
Total number reporting total income, 1968 and 1972	514	253	510
Total percent	100	100	100
No pension	61	8	20
Social security only <sup>2</sup>	34	57	60
Social security and other pension <sup>3</sup>	3	31	14
Other pension only <sup>3</sup>	2	4	6

<sup>1</sup> Pension receipt based on income sources of both respondent and spouse.  
<sup>2</sup> Represents retired worker, disabled worker, and survivor benefits for respondent and spouse.  
<sup>3</sup> Represents private employer or union pensions, Federal, State, and local government employee pensions, and railroad and military retirement pensions for respondent and spouse.

generally in combination with social security benefits. This figure contrasts with 51 percent for nonmarried men and 58 percent for married men. Eight percent of the nonmarried women in this employment category reported no pension of any sort, compared with 12 percent of the nonmarried men and only 4 percent of the married men.

*Those not employed in either year*—As stated previously, fewer men than women fall in this group. Twenty percent of the nonmarried women and 18 percent of the nonmarried men reported no pension of any sort, compared with 10 percent of the married men. Sixty percent of the nonmarried women reported receiving no pension other than social security benefits, compared with about 50 percent of the men. The survey responses indicate that among this group a substantial minority of the men were receiving disabled-worker benefits and a similar proportion of the women.

were receiving survivor benefits. As explained above, however, the Social Security Administration benefit records will later provide more accurate information about these benefit types. Only 20 percent of the nonmarried women received a pension other than social security benefits (generally in addition to social security benefits), compared with 31 percent of the nonmarried men and a substantial minority—42 percent—of the married men.

### INCOME LEVEL AND CHANGE

Income level and change can be examined in several ways. To show gross shifts in the income position of sample members, transition tables expressed in current dollars are used. A related method employs simplified transition tables with just two arbitrary income levels, "low" and "high," expressed in constant dollars. These tables are classified by type of pension received and the sex, marital status, and employment status of the groups used in the more detailed transition tables. Another method involves looking at the 1968 income level and the ratio of 1972 income to 1968 income, in both current and constant dollars, for the principal groups.<sup>6</sup>

### Detailed Income Transition

Table 3 classifies respondents or couples by their income position in 1968 and 1972, with percentages expressed in terms of the total in each table plane. The totals show that men—in particular, married men—had higher incomes at the beginning and end of the period than did women. Only a relatively few nonmarried women had incomes exceeding \$7,500 in either or both years.

*Those employed in both years*—Persons in this group had about the same 1968 income distribution as those who stopped working, but a greater proportion had incomes above \$7,500 in 1972 than in 1968. This change indicates that their earnings were rising at a fairly rapid pace during the period.

*Those who stopped working*—The greatest

<sup>6</sup> A paper using dummy variable regression analysis to accomplish essentially the same goals was presented by the author at the 1976 meetings of the Western Economic Association.

changes are evident among those who ceased employment between the two survey years. Sixty-two percent of the married men in this group had incomes exceeding \$7,500 in 1968 while still working, but only 35 percent did so in 1972 after they had stopped working. Similarly, 36 percent of the nonmarried men and 15 percent of the women received more than \$7,500 in 1968, compared with 6 percent and 10 percent, respectively, in 1972 after they had stopped working. It is interesting to note that the nonmarried men were much better off than the nonmarried women before they stopped working, but afterward they were in approximately the same situation.

*Those not employed in either year*—Persons in this group started with very low incomes, though their final incomes were somewhat higher. The increase is probably traceable both to receipt of new income (such as social security benefits beginning as early as age 62) and cost-of-living increases for those already receiving social security benefits or some other pensions.

As the tabulation below shows, persons employed in both years displayed a strong tendency

Employment status and comparison of income categories	Married men and spouses	Non married men	Non married women
<i>Employed in 1968 and 1972</i>			
Category in 1972			
Lower than 1968	14	16	9
Same as 1968	37	39	45
Higher than 1968	49	46	46
<i>Employed in 1968 but not in 1972</i>			
Category in 1972			
Lower than 1968	61	63	45
Same as 1968	30	30	47
Higher than 1968	9	7	8
<i>Employed in neither year</i>			
Category in 1972			
Lower than 1968	12	4	4
Same as 1968	40	61	77
Higher than 1968	47	35	19

to have their income increases outweigh their decreases. Persons moving to a higher category outnumbered those moving to a lower one by about 4 to 1. Of those employed in 1968 but not in 1972, movement into lower categories was considerable. Decreases outnumbered increases by about 6 to 1. For persons not employed in either year, increases outnumbered decreases by about 4 to 1. The total income of these persons tended to be low in both years, however, as indicated by the heavy concentration at the low end of table 3.

### Simplified Income Transition

Since the Consumer Price Index of the Bureau of Labor Statistics rose 20 percent in the 4-year

period under discussion, identical income categories are not equal in terms of purchasing power. Furthermore, to avoid extremely small percentages, the income categories are rather wide, con-

TABLE 3 — Total money income, 1972, by total money income, 1968 (in current dollars) Percentage distribution of respondents, by employment status in 1968 and 1972, marital status, and sex <sup>1</sup>

Total money income 1972, and employment status, 1968 and 1972	Total money income, 1968						
	Total	Less than \$2,500	\$2,500-4,999	\$5,000-7,499	\$7,500-9,999	\$10,000-14,999	\$15,000-19,999
<b>Married men and spouses</b>							
<i>Employed in 1968 and 1972</i>							
Total number	1,561						
Total percent <sup>2</sup>	100	6	14	24	19	22	8
Less than \$2,500	4	2	1	0	0	0	0
2,500-4,999	13	3	6	2	1	1	0
5,000-7,499	16	1	4	7	2	1	0
7,500-9,999	17	0	2	9	4	2	0
10,000-14,999	25	0	1	4	10	8	1
15,000-19,999	13	0	0	1	1	7	5
20,000 or more	13	0	0	0	0	2	3
<i>Employed in 1968 but not in 1972</i>							
Total number	618						
Total percent <sup>2</sup>	100	6	12	20	23	26	7
Less than \$2,500	12	4	4	2	1	0	0
2,500-4,999	25	0	7	9	5	3	0
5,000-7,499	28	1	1	7	10	7	1
7,500-9,999	16	0	0	1	4	8	2
10,000-14,999	14	0	0	0	3	6	3
15,000-19,999	4	0	0	0	0	0	1
20,000 or more	2	0	0	0	0	0	1
<i>Not employed in 1968 or 1972</i>							
Total number	257						
Total percent <sup>2</sup>	100	28	41	16	8	6	0
Less than \$2,500	18	13	5	0	0	0	0
2,500-4,999	34	14	17	3	0	0	0
5,000-7,499	23	2	13	6	2	0	0
7,500-9,999	16	0	5	5	4	2	0
10,000-14,999	5	0	1	2	2	1	0
15,000-19,999	2	0	0	0	0	2	0
20,000 or more	2	0	0	0	0	1	0
<b>Nonmarried men</b>							
<i>Employed in 1968 and 1972</i>							
Total number	237						
Total percent <sup>2</sup>	100	18	26	19	15	13	5
Less than \$2,500	12	8	3	0	0	1	0
2,500-4,999	22	8	11	3	1	0	0
5,000-7,499	23	3	9	8	3	0	0
7,500-9,999	15	0	3	5	4	2	0
10,000-14,999	16	0	0	3	5	5	2
15,000-19,999	8	0	0	0	1	4	1
20,000 or more	5	0	0	0	0	0	3
<i>Employed in 1968 but not in 1972</i>							
Total number	115						
Total percent <sup>2</sup>	100	18	20	26	19	16	0
Less than \$2,500	31	15	10	5	1	2	0
2,500-4,999	43	4	9	17	10	3	0
5,000-7,499	20	1	0	4	7	8	0
7,500-9,999	2	0	1	0	1	0	0
10,000-14,999	2	0	0	0	0	0	0
15,000-19,999	0	0	0	0	0	0	0
20,000 or more	2	0	0	0	0	1	1

See footnotes at end of table

TABLE 3—Total money income, 1972, by total money income, 1968 Percentage distribution of respondents, by employment status in 1968 and 1972, marital status, and sex <sup>1</sup>—Continued

Total money income, 1972, and employment status, 1968 and 1972	Total money income, 1968						
	Total	Less than \$2,500	\$2,500-4,999	\$5,000-7,499	\$7,500-9,999	\$10,000-14,999	\$15,000-19,999
<i>Nonmarried men—Continued</i>							
<i>Not employed in 1968 or 1972</i>							
Total number	102	-	-	-	-	-	-
Total percent <sup>2</sup>	100	72	19	6	3	0	1
Less than \$2,500	53	80	2	0	1	0	0
2,500-4,999	30	20	10	1	0	0	0
5,000-7,499	8	1	7	0	0	0	0
7,500-9,999	4	0	0	4	0	0	0
10,000-14,999	4	1	0	1	2	0	0
15,000-19,999	1	0	0	0	0	1	0
20,000 or more	0	0	0	0	0	0	0
<i>Nonmarried women</i>							
<i>Employed in 1968 and 1972</i>							
Total number	514	-	-	-	-	-	-
Total percent <sup>2</sup>	100	22	39	24	9	4	0
Less than \$2,500	16	11	4	0	0	0	0
2,500-4,999	31	10	10	2	0	0	0
5,000-7,499	25	1	13	10	1	0	0
7,500-9,999	14	0	2	10	2	0	0
10,000-14,999	11	0	1	2	5	3	0
15,000-19,999	2	0	0	0	0	1	0
20,000 or more	1	0	0	0	0	0	0
<i>Employed in 1968 but not in 1972</i>							
Total number	253	-	-	-	-	-	-
Total percent <sup>2</sup>	100	29	34	22	9	6	0
Less than \$2,500	52	25	23	4	0	0	0
2,500-4,999	28	4	11	11	2	1	0
5,000-7,499	10	0	0	0	2	2	0
7,500-9,999	6	0	0	1	4	0	0
10,000-14,999	2	0	0	0	0	2	0
15,000-19,999	1	0	0	0	0	0	0
20,000 or more	0	0	0	0	0	0	0
<i>Not employed in 1968 or 1972</i>							
Total number	510	-	-	-	-	-	-
Total percent <sup>2</sup>	100	84	11	3	1	0	0
Less than \$2,500	71	68	2	0	0	0	0
2,500-4,999	22	15	7	1	0	0	0
5,000-7,499	4	1	2	2	0	0	0
7,500-9,999	1	0	0	1	0	0	0
10,000-14,999	1	0	0	0	0	0	0
15,000-19,999	0	0	0	0	0	0	0
20,000 or more	0	0	0	0	0	0	0

<sup>1</sup> See table 1, footnote 1

<sup>2</sup> For 1972 total money income, expressed as percentages of total number

cealing movement within each A much simplified set of transition matrices has therefore been prepared, containing selected income classes expressed in constant dollars

Table 4 summarizes these matrices The 1968 levels for couples are set at \$2,500, below which they are termed "low-income," and at \$10,000, above which they are termed "high-income" For nonmarried men and women, the levels are 80 percent of those for couples—\$2,000 and \$8,000 for "low" and "high," respectively The 1972

levels are all 20 percent higher than the 1968 levels<sup>7</sup>

The data in table 4 are classified by type of pension reported in 1972 The discussion here focuses on the most important groups Those below the low-income line in both 1968 and 1972,

<sup>7</sup> The low-income levels are similar to the poverty thresholds of the Bureau of the Census, which were \$2,333 for couples and \$1,800 for nonmarried persons under age 65 in 1968 The high income levels for this analysis were arbitrarily set at four times the low-income levels

TABLE 4 —Income level, 1968 and 1972, and pension status, 1972, by employment status, 1968 and 1972. Number and percent of respondents, by marital status and sex

Pension status and income level <sup>1</sup>	Employed in 1968 and 1972	Employed in 1968 but not in 1972	Not employed in 1968 or 1972
<b>Married men and spouses</b>			
<i>No pension</i>			
Total number.....	1,048	25	26
Low in 1968 and 1972.....	2	8	31
Low in 1972 but not in 1968.....	2	16	23
High in 1968 and 1972.....	33	20	0
<i>Social security only</i> <sup>2</sup>			
Total number .....	300	237	123
Low in 1968 and 1972.....	5	10	21
Low in 1972 but not in 1968.....	5	23	11
High in 1968 and 1972.....	12	3	2
<i>Other pension</i> <sup>4</sup>			
Total number .....	164	356	108
Low in 1968 and 1972.....	1	1	5
Low in 1972 but not in 1968.....	2	3	3
High in 1968 and 1972.....	41	13	7
<b>Nonmarried men</b>			
<i>No pension</i>			
Total number .....	169	14	18
Low in 1968 and 1972.....	7	( <sup>5</sup> )	( <sup>5</sup> )
Low in 1972 but not in 1968.....	4	( <sup>5</sup> )	( <sup>5</sup> )
High in 1968 and 1972.....	26	( <sup>5</sup> )	( <sup>5</sup> )
<i>Social security only</i> <sup>2</sup>			
Total number .....	47	43	53
Low in 1968 and 1972.....	13	14	51
Low in 1972 but not in 1968.....	6	23	8
High in 1968 and 1972.....	2	0	0
<i>Other pension</i> <sup>4</sup>			
Total number .....	21	58	31
Low in 1968 and 1972.....	( <sup>5</sup> )	10	3
Low in 1972 but not in 1968.....	( <sup>5</sup> )	9	3
High in 1968 and 1972.....	( <sup>5</sup> )	7	10
<b>Nonmarried women</b>			
<i>No pension</i>			
Total number .....	316	19	104
Low in 1968 and 1972.....	4	( <sup>5</sup> )	51
Low in 1972 but not in 1968.....	4	( <sup>5</sup> )	23
High in 1968 and 1972.....	12	( <sup>5</sup> )	9
<i>Social security only</i> <sup>2</sup>			
Total number .....	173	144	306
Low in 1968 and 1972.....	17	26	59
Low in 1972 but not in 1968.....	10	46	14
High in 1968 and 1972.....	3	1	1
<i>Other pension</i> <sup>4</sup>			
Total number .....	25	90	100
Low in 1968 and 1972.....	4	6	30
Low in 1972 but not in 1968.....	4	6	4
High in 1968 and 1972.....	12	7	2

<sup>1</sup> For the definition of income level, see text, page 21

<sup>2</sup> Based on less than 100 cases

<sup>3</sup> See table 2, footnote 2

<sup>4</sup> See table 2, footnote 3

<sup>5</sup> Not shown, base less than 25

those above it in 1968 but below it in 1972, and those above the high-income line in both years

*Those with no pension in 1972*—Among persons in this group, those employed in both years were clearly better off than those who either stopped working after 1968 or had already stopped working by that year. Among married men who were still working, 33 percent had high incomes in both years, as did 12 percent of the women. By contrast, persons who were not employed in either year but reported no pension were very badly off. One-half of the couples were below the low-income line in 1972, as were three-fourths of the women.

*Those with social security benefits alone*—Social security benefits alone were insufficient to keep most retirees above the low-income line. Of the couples who were not working in either year or who had stopped working between 1968 and 1972, about a third were below the low-income line in 1972. The situation was even worse among the nonmarried women. Almost three-fourths of those who were not working in 1972 had low incomes. Of those who reported receiving social security benefits while continuing to work, only 10 percent of the couples had low incomes in 1972, compared with 27 percent of the nonmarried women.

*Those with other pensions*—Persons receiving other pensions were much better off than those receiving social security benefits alone. Thirteen percent of the couples in which the respondent had stopped working had high incomes in both years, and only 4 percent had low incomes. For most, their incomes were in the medium range. Married men who received other pensions while continuing to work were very well off, but such a situation, of course, is rather rare. Women who received other pensions were better off than those with social security benefits alone. Little can be determined about nonmarried men because of the small sample size.

### Income Levels and Ratios

To analyze income level and change by both employment status and pension receipt, 1968 total



money income was tabulated along with the ratios of 1972/1968 income, both in current and in constant dollars (The latter may be referred to as

the purchasing-power ratio) These distributions are shown in table 5, along with medians

*Married men employed in both years*—Of the

TABLE 5—Total money income, 1968, and ratio of 1972 income to 1968 income (in current and constant dollars), by pension status, 1972, and employment status, 1968 and 1972 Number and percentage distribution of respondents, by marital status and sex <sup>1</sup>

Employment status, income, and income ratios (percent)	Total	No pension	Social security only <sup>2</sup>	Other pension		
				Total	Social security and other pension <sup>3</sup>	Other pension only <sup>4</sup>
<b>Married men and spouses</b>						
<i>Employed in 1968 and 1972</i>						
Total number..	1,549	1,040	346	163	487	476
Total percent	100	100	100	100	100	100
1968 income						
\$1-4,999	20	15	39	9	9	8
5,000-9,999	43	45	41	34	37	32
10,000-14,999	22	24	14	29	24	34
15,000 or more..	15	16	6	28	30	26
Median income	\$8,270	\$8,760	\$5,970	\$10,960	\$10,580	\$11,350
Ratio of 1972 income to 1968 income, current dollars						
Below 50	4	3	8	4	6	3
50-74	6	4	11	13	18	6
75-99	14	13	18	17	24	9
100-124	27	29	24	23	23	23
125-149	24	26	17	20	11	29
150 or more	25	26	22	23	17	30
90-109 <sup>5</sup>	16	16	18	14	20	8
Median ratio..	124	127	114	120	102	128
Ratio of 1972 income to 1968 income, constant dollars						
Below 50	7	4	13	12	18	5
50-74	14	11	20	18	24	12
75-99	31	33	28	27	20	26
100-124	27	30	21	24	16	32
125-149	9	10	7	8	3	13
150 or more	11	12	11	10	9	12
90-109 <sup>5</sup>	29	31	23	26	17	35
Median ratio..	99	101	91	95	81	102
<i>Employed in 1968 but not in 1972</i>						
Total number	610	19	236	355	318	437
Total percent..	100	( <sup>6</sup> )	100	100	100	100
1968 income						
\$1-4,999	18	( <sup>6</sup> )	36	6	6	8
5,000-9,999	43	( <sup>6</sup> )	39	45	46	38
10,000-14,999	26	( <sup>6</sup> )	18	30	31	24
15,000 or more..	13	( <sup>6</sup> )	6	18	17	30
Median income..	\$8,640	( <sup>6</sup> )	\$6,950	\$9,870	\$9,790	\$10,500
Ratio of 1972 income to 1968 income, current dollars						
Below 50	20	( <sup>6</sup> )	29	14	11	35
50-74	33	( <sup>6</sup> )	30	35	36	27
75-99	25	( <sup>6</sup> )	17	32	32	24
100-124	13	( <sup>6</sup> )	15	11	12	8
125-149	4	( <sup>6</sup> )	3	4	5	0
150 or more	5	( <sup>6</sup> )	6	5	4	5
90-109 <sup>5</sup>	15	( <sup>6</sup> )	13	16	17	8
Median ratio..	74	( <sup>6</sup> )	67	76	77	66
Ratio of 1972 income to 1968 income, constant dollars						
Below 50	34	( <sup>6</sup> )	43	27	25	46
50-74	39	( <sup>6</sup> )	29	47	48	38
75-99	18	( <sup>6</sup> )	18	17	17	11
100-124	4	( <sup>6</sup> )	4	5	5	0
125-149	1	( <sup>6</sup> )	2	1	1	0
150 or more	3	( <sup>6</sup> )	3	3	3	5
90-109 <sup>5</sup>	8	( <sup>6</sup> )	8	7	7	5
Median ratio..	59	( <sup>6</sup> )	54	61	61	52

See footnotes at end of table

TABLE 5—Total money income, 1968, and ratio of 1972 income to 1968 income (in current and constant dollars), by pension status, 1972, and employment status, 1968 and 1972 Number and percentage distribution of respondents by marital status and sex <sup>1</sup>—Continued

Employment status income, and income ratios (percent)	Total	No pension	Social security only <sup>2</sup>	Other pension		
				Total	Social security and other pension <sup>2</sup>	Other pension only <sup>2</sup>
<b>Married men and spouses—Continued</b>						
<i>Not employed in 1968 or 1972</i>						
Total number.....	250	21	121	108	495	13
Total percent.....	100	(*)	100	100	100	(*)
1968 income						
\$1-4,999.....	68	(*)	84	46	46	(*)
5,000-9,999.....	25	(*)	14	41	40	(*)
10,000-14,999.....	6	(*)	2	12	13	(*)
15,000 or more.....	0	(*)	0	1	1	(*)
Median income.....	\$3,850	(*)	\$2,950	\$5,500	\$5,440	(*)
Ratio of 1972 income to 1968 income, current dollars						
Below 50.....	5	(*)	6	3	2	(*)
50-74.....	6	(*)	6	6	7	(*)
75-99.....	14	(*)	7	19	20	(*)
100-124.....	20	(*)	20	19	18	(*)
125-149.....	18	(*)	14	23	21	(*)
150 or more.....	38	(*)	47	30	32	(*)
90-109 <sup>3</sup> .....	14	(*)	12	14	15	(*)
Median ratio.....	151	(*)	145	128	128	(*)
Ratio of 1972 income to 1968 income, constant dollars						
Below 50.....	8	(*)	9	6	5	(*)
50-74.....	13	(*)	7	20	21	(*)
75-99.....	24	(*)	22	23	22	(*)
100-124.....	22	(*)	21	24	23	(*)
125-149.....	13	(*)	15	13	15	(*)
150 or more.....	20	(*)	26	14	14	(*)
90-109 <sup>3</sup> .....	20	(*)	17	22	19	(*)
Median ratio.....	105	(*)	116	101	102	(*)
<b>Nonmarried women</b>						
<i>Employed in 1968 and 1972</i>						
Total number.....	514	316	173	425	14	11
Total percent.....	100	100	100	100	(*)	(*)
1968 income						
\$1-4,999.....	61	47	90	40	(*)	(*)
5,000-9,999.....	33	45	8	56	(*)	(*)
10,000-14,999.....	4	6	2	4	(*)	(*)
15,000 or more.....	1	2	1	0	(*)	(*)
Median income.....	\$4,210	\$5,120	\$2,650	\$5,880	(*)	(*)
Ratio of 1972 income to 1968 income, current dollars						
Below 50.....	3	4	2	0	(*)	(*)
50-74.....	5	2	10	16	(*)	(*)
75-99.....	13	9	19	16	(*)	(*)
100-124.....	25	25	24	32	(*)	(*)
125-149.....	27	35	13	20	(*)	(*)
150 or more.....	27	24	33	16	(*)	(*)
90-109 <sup>3</sup> .....	13	11	16	20	(*)	(*)
Median ratio.....	128	130	119	118	(*)	(*)
Ratio of 1972 income to 1968 income, constant dollars						
Below 50.....	5	4	5	12	(*)	(*)
50-74.....	12	8	20	12	(*)	(*)
75-99.....	30	29	29	40	(*)	(*)
100-124.....	30	39	15	20	(*)	(*)
125-149.....	9	9	8	8	(*)	(*)
150 or more.....	14	10	23	8	(*)	(*)
90-109 <sup>3</sup> .....	33	39	21	40	(*)	(*)
Median ratio.....	102	104	96	96	(*)	(*)

See footnotes at end of table

TABLE 5—Total money income, 1968, and ratio of 1972 income to 1968 income (in current and constant dollars), by pension status, 1972, and employment status, 1968 and 1972. Number and percentage distribution of respondents by marital status and sex <sup>1</sup>—Continued

Employment status, income, and income ratios (percent)	Total	No pension	Social security only <sup>2</sup>	Other pension		
				Total	Social security and other pension <sup>3</sup>	Other pension only <sup>3</sup>
<i>Nonmarried women—Continued</i>						
<i>Employed in 1968 but not in 1972</i>						
Total number	246	12	144	490	479	11
Total percent	100	( <sup>4</sup> )	100	100	100	( <sup>4</sup> )
1968 income						
\$1-4,999	63	( <sup>4</sup> )	84	28	29	( <sup>4</sup> )
5,000-9,999	30	( <sup>4</sup> )	14	59	59	( <sup>4</sup> )
10,000-14,999	6	( <sup>4</sup> )	2	13	11	( <sup>4</sup> )
15,000 or more	0	( <sup>4</sup> )	0	0	0	( <sup>4</sup> )
Median income	\$3,710	( <sup>4</sup> )	\$2,970	\$6,000	\$6,310	( <sup>4</sup> )
Ratio of 1972 income to 1968 income, current dollars						
Below 50	20	( <sup>4</sup> )	28	8	8	( <sup>4</sup> )
50-74	25	( <sup>4</sup> )	26	27	27	( <sup>4</sup> )
75-99	24	( <sup>4</sup> )	19	36	35	( <sup>4</sup> )
100-124	10	( <sup>4</sup> )	8	14	15	( <sup>4</sup> )
125-149	6	( <sup>4</sup> )	5	10	11	( <sup>4</sup> )
150 or more	13	( <sup>4</sup> )	15	6	5	( <sup>4</sup> )
90-109 <sup>5</sup>	11	( <sup>4</sup> )	8	18	16	( <sup>4</sup> )
Median ratio	77	( <sup>4</sup> )	69	81	81	( <sup>4</sup> )
Ratio of 1972 income to 1968 income, constant dollars						
Below 50	35	( <sup>4</sup> )	41	24	22	( <sup>4</sup> )
50-74	31	( <sup>4</sup> )	28	39	42	( <sup>4</sup> )
75-99	15	( <sup>4</sup> )	12	22	22	( <sup>4</sup> )
100-124	7	( <sup>4</sup> )	6	11	13	( <sup>4</sup> )
125-149	1	( <sup>4</sup> )	0	1	1	( <sup>4</sup> )
150 or more	11	( <sup>4</sup> )	13	2	1	( <sup>4</sup> )
90-109 <sup>5</sup>	6	( <sup>4</sup> )	6	8	9	( <sup>4</sup> )
Median ratio	62	( <sup>4</sup> )	57	66	66	( <sup>4</sup> )
<i>Not employed in 1968 or 1972</i>						
Total number	442	471	275	496	468	428
Total percent	100	100	100	100	100	100
1968 income						
\$1-4,999	95	97	95	93	94	89
5,000-9,999	5	3	4	7	6	11
10,000-14,999	0	0	1	0	0	0
15,000 or more	0	0	1	0	0	0
Median income	\$1,360	\$1,100	\$1,320	\$1,810	\$1,850	\$1,630
Ratio of 1972 income to 1968 income, current dollars						
Below 50	5	11	4	4	3	7
50-74	5	7	5	4	6	0
75-99	10	15	9	6	7	4
100-124	16	13	15	22	16	36
125-149	19	21	18	21	24	14
150 or more	45	32	49	43	44	39
90-109 <sup>5</sup>	10	14	9	8	7	11
Median ratio	144	152	149	141	144	128
Ratio of 1972 income to 1968 income, constant dollars						
Below 50	7	17	6	5	4	7
50-74	10	11	11	9	12	4
75-99	18	18	17	22	16	36
100-124	23	25	23	24	26	18
125-149	15	7	17	16	16	14
150 or more	25	21	27	24	25	21
90-109 <sup>5</sup>	19	21	15	27	24	36
Median ratio	116	104	119	112	116	102

<sup>1</sup> See table 1, footnote 1

<sup>2</sup> See table 2, footnote 2

<sup>3</sup> See table 2, footnote 3

<sup>4</sup> Based on less than 100 cases

<sup>5</sup> Represents income that remained approximately the same in 1968 as in 1972

<sup>6</sup> Not shown, base less than 25

married men employed in both years, those with no pension in 1972 (two-thirds of the total) had a median 1968 income of \$8,760 and a median constant-dollar income ratio of 101 percent, indicating that their total money income kept pace almost exactly with the rising cost of living. The distribution of the ratio was quite concentrated, with 31 percent having constant-dollar 1972 incomes within 10 percent of their 1968 incomes. The small number receiving social security benefits but no other pension in 1972 had an initial median income below \$6,000, and their median constant-dollar incomes ratio was 91 percent, indicating some slippage but not much. Many of these respondents evidently were using social security benefits to supplement historically low or decreasing earnings. The few persons receiving a pension other than social security benefits were relatively well off to begin with (median 1968 income close to \$11,000) and their income nearly kept up with inflation.

*Married men who stopped working*—Persons in this group who left their jobs between 1968 and 1972 experienced a considerable decline in their incomes. Those receiving only social security benefits in 1972 had a median starting income of \$6,950 and a median constant-dollar income ratio of 54 percent—that is, their median 1972 income could purchase only a little over half of what their 1968 income commanded. Those with pensions other than social security benefits had far higher incomes in 1968. The median amount was \$9,870 and the median income ratio was slightly higher—61 percent in constant dollars. Not only did such persons begin with about 40 percent more income than did those receiving social security benefits only, but the differential increased slightly after retirement.

*Married men not employed in either year*—Persons in this group generally were not well off. Those receiving only social security benefits had very low starting incomes (a median of \$2,930, with only 16 percent above \$5,000), compensated somewhat by a gain in real income. Presumably, this increase resulted from the receipt of benefits some time after 1968 or, if they were already on the rolls in that year, from the rapid rise in those benefits. Persons receiving other pensions were considerably better off, registering median

starting incomes of \$5,500 and a constant-dollar income ratio of 101 percent. This income situation contrasts in two ways with that of persons who had stopped working. Median 1968 incomes of married men not employed in either year were far lower—\$5,500, compared with \$9,870—but their income kept up well with the rise in living costs. It is assumed that those not employed in either year were already receiving their other pensions in 1968 and that the income decline at retirement had already taken place.

Although nonmarried men were not nearly as well off as married men, they were somewhat better off than nonmarried women, as the following selected income figures reveal.

Employment status and pension receipt	Nonmarried men		Nonmarried women	
	Number in sample	Median 1968 income	Number in sample	Median 1968 income
Employed in—				
1968 and 1972 no pension . . . . .	169	\$6 130	316	\$5,120
1968 but not in 1972				
Social security only . . . . .	43	4 540	144	2 970
Other pension . . . . .	58	7,900	90	6,600
Neither year				
Social security only . . . . .	50	1,380	275	1 320
Other pension . . . . .	31	2,880	96	1 810

The number of nonmarried men in the sample was rather small, however, as indicated by the sample numbers in the tabulation. The following discussion is therefore confined to nonmarried women.

*Nonmarried women employed in both years*—As noted earlier, a substantial minority of the respondents in this group received social security benefits in 1972. Their 1968 median income amounted to only \$2,530, compared with \$5,120 for nonmarried women who continued to work without any pension. The nonmarried women with no pensions remained in almost exactly the same position with respect to purchasing power (median, 104 percent), as did those with social security benefits as their only pension (median, 96 percent).

*Nonmarried women who stopped working*—The women in this group who reported only social security benefits in 1972 had rather low 1968 incomes (median, \$2,970), with a median purchasing-power ratio of 57 percent. Nonmarried women

who reported pensions other than social security benefits had much higher starting incomes (\$6,600) and also experienced a higher constant-dollar income ratio (66 percent)

*Nonmarried women not employed in either year*—Persons in this group were in bad shape economically. Those receiving social security benefits only—the majority—had initial median incomes of \$1,320. The medians for those with no pension at all and for the small number of those with pensions other than social security benefits were \$1,100 and \$1,810, respectively.

The only bright aspect to the economic situation of these women was that their incomes did increase at a fairly rapid pace. The median constant-dollar ratio for those with social security benefits alone was 119 percent, and only about a third of such persons suffered a decrease in their real income. Those with other pensions had a median ratio of 112 percent, and those with no pension registered a ratio of 104 percent. Thus, the economic situation of this group of nonmarried women was not getting any worse. Unfortunately, their initial situation was so bad that the improvements do not mean much.

## SUMMARY AND A LOOK AHEAD

Cessation of work was accompanied by a considerable reduction in total income for the survey population—about 40–45 percent, measured in constant dollars—over the 4-year period 1968–72. The percentage of income decline was about the same regardless of sex, marital status, or type of pension received. Income requirements may be reduced at retirement because retired persons no longer have work-related expenses, need not save or make contributions toward retirement, enjoy certain tax advantages, and may move to a smaller residence. As this article was made clear, however, few retirees enjoy anything close to their preretirement income, even taking into consideration the assumed reductions in necessary expenditures.

The initial income level of persons receiving pensions other than social security benefits was considerably higher, however, than that for persons without other pensions, 40 percent higher at the median for married men, 75 percent higher

for nonmarried men, and over twice as high for nonmarried women. A given percentage decrease in income is more serious, of course, if income is inadequate or close to inadequate at the outset.

Overall, the income of persons who continued to work kept pace rather well with the cost of living. Initial income was low, however, for the substantial minority of nonmarried women who in 1972 received some social security benefits while continuing to work at low-paying or part-time jobs. The income situation of nonmarried women who were not employed in either 1968 or 1972 was unfavorable in both years. The only bright aspect to their economic situation is that social security benefits increased considerably during that period and have continued to increase since then but at a much slower rate.

Thus, for the entire sample population, income adequacy can largely be related to employment and pension characteristics. In this respect, the nonmarried women are at a tremendous disadvantage compared with couples. They were far more likely to be out of the labor force as early as 1968, and few had private or government employee pensions to supplement their social security benefits. Most of these women will probably continue to have marginal incomes.

By contrast, married men had a much better chance of continuing to be employed or, if no longer employed, of having pensions other than social security benefits. Their income situation was for the most part comfortable before and after retirement. Nonmarried men, who make up a relatively small group, generally were better off than the women but not as well off as the married men.

Future RHS reports will explore all these issues in greater depth. Specifically, attempts will be made to relate characteristics of the respondents' worklives and background (education, occupation, tenure on longest job, etc.) to their income before and after retirement. Another focus for future research, only alluded to in this article, is the issue of partial retirement. What, for example, causes some people to reduce their supply of labor and others to withdraw entirely from the labor force? What effects does partial retirement have on income? And how satisfied are the respondents with their income?

Further into the future, what happens to sample members in the first several years after

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

retirement will be analyzed Most of the persons who had already left the labor force in 1968 were not what could be termed "normal" retirees, most had either been sick or disabled or, in the case of the women, had not worked at all in the recent past Future waves of the survey will permit analysis of more normal retirees after they retire For them, particular interest will focus on whether various forms of retirement income keep pace with the cost of living

groups were used for the Retirement History Study Information was gathered from sample members and their spouses by interviewers of the Bureau of the Census, usually in late spring of the survey year In 1969, there were 11,153 completed interviews, in 1971, 10,169, and in 1973, 9,423

Technical Note\*

The RHS 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).<sup>a</sup> Sample members were persons living in households that had last participated in the CPS before February 1969 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

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 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 that are 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

\* The first two sections of this note were prepared by Bennie A Clemmer, Division of Retirement and Survivor Studies, Office of Research and Statistics

<sup>a</sup> For a general but somewhat dated description of the CPS, see Bureau of the Census, *The Current Population Survey—A Report on Methodology* (Technical Paper No 7), 1963 See also Marvin M Thompson and Gary Shapiro, "The Current Population Survey An Overview," *Annals of Economic and Social Measurement*, April 1973

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 stated 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—for example, the standard error of a 50-percent characteristic.

(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, find by linear interpolation the values that correspond to the limits in step 2. These values are the 95-percent confidence limits for the percentile.

### Income-Response Rates

The income base for this article is data collected in 1968 and 1972, information from the 1971 interview wave (1970 income) is not used here. A total of 63 percent of the respondents supplied usable income data in both years—60 percent of the married men, 67 percent of the nonmarried women, and 69 percent of the nonmarried men (table II). The relatively low response rates reflect the influence of several factors, foremost among which is the very conservative editing of income response used thus far in the survey. In both years, respondents had to give usable answers to about 20 different income components (twice that, if married). An inadequate response on any one of these components was enough to cause a nonresponse for the entire set.

A decrease in income-response rates of about 8 percentage points took place between 1968 and 1972. How much of this decline was because of the slightly more complicated 1973 questionnaire and how much to other factors is not known.

The low response rates appear even more

TABLE II—Response on total money income, 1968, 1970, 1972, by employment status, 1968 and 1972. Number and percent of respondents, by year of response, marital status, and sex<sup>1</sup>

Year of response	Total	Em- ployed in 1968 and 1972	Em- ployed in 1968 but not in 1972	Not em- ployed in 1968 or 1972	Other
<b>Married men and spouses</b>					
Total number in survey, 1973.....	5,502	2,265	1,014	432	1,791
Percent responding in— 1968 and 1972.....	60	69	61	59	49
1968, 1970, and 1972.....	45	53	46	42	36
1968.....	80	86	85	80	70
1972.....	72	79	71	72	65
1972 as percent of those responding in 1968.....	75	80	72	74	70
<b>Nonmarried men</b>					
Total number in survey, 1973.....	912	294	174	155	289
Percent responding in— 1968 and 1972.....	69	81	66	66	60
1968, 1970, and 1972.....	55	67	51	48	48
1968.....	86	93	90	85	78
1972.....	78	86	74	75	76
1972 as percent of those responding in 1968.....	80	87	74	78	78
<b>Nonmarried women</b>					
Total number in survey, 1973.....	2,514	674	384	763	693
Percent responding in— 1968 and 1972.....	67	76	66	67	58
1968, 1970, and 1972.....	61	59	49	52	43
1968.....	86	92	91	83	79
1972.....	76	82	71	78	71
1972 as percent of those responding in 1968.....	78	83	72	80	74

<sup>1</sup> Percentages are not exclusive. Percent responding in 1968, for example, includes persons who also responded in 1970 and 1972.

serious when viewed in a 3-year context. Less than 50 percent of the respondents gave usable information in 1968, 1970, and 1972.

Nonresponse on asset income—a source commonly reported but usually in small amounts—was high.<sup>9</sup> Considering all sources of income other than assets, 97 percent of all persons employed in 1968 responded, compared with about 88 percent when asset income is included (table III). The exclusion of asset income from total money income increases response rates by more than 10 percent—

<sup>9</sup> See *Reaching Retirement Age Findings from a Survey of Newly Entitled Workers, 1968-70* (Research Report No. 47), Office of Research and Statistics, 1976, chapter 8.

TABLE III—Response on total money income (TMI) and total money income other than asset income, 1968, 1970, 1972, by employment status, 1968 and 1972 Number and percent of respondents, by year of response <sup>1</sup>

Year of response	Total		Employed in 1968 and 1972		Employed in 1968 but not in 1972		Not employed in 1968 or 1972		Other	
	TMI	TMI other than asset income	TMI	TMI other than asset income	TMI	TMI other than asset income	TMI	TMI other than asset income	TMI	TMI other than asset income
Total number in survey, 1973 <sup>2</sup>	9 423	9 423	3 336	3 336	1 730	1,730	1 414	1,414	2 943	2 943
Percent responding in—										
1968 and 1972	63	76	71	88	62	77	64	74	52	64
1968, 1970, and 1972	47	63	55	74	47	62	48	59	39	52
1968	82	91	88	97	87	97	82	89	73	81
1972	74	83	80	91	71	79	75	83	67	77
1972 as percent of those responding in 1968	76	84	81	91	72	79	77	83	72	79

<sup>1</sup> See table II, footnote 1

<sup>2</sup> Includes a small number of surviving spouses

age points—from 63 percent to 76 percent of those responding in both 1968 and 1972

Persons whose employment status was in transition during 1968–69 or 1972–73 (termed “other” in table III) had substantially lower response rates than did the rest. This difference seems to indicate that people are most likely to respond if all sources of income have been received for some time, combinations of income from employment and pensions, especially when the pensions started after employment ended, apparently are difficult to remember.

A comparison of persons giving usable income

responses in both years with nonrespondents reveals some slight variations according to employment status (highly correlated with income change) and education (highly correlated with income level) (table IV). Nonrespondents were slightly more likely to have stopped working between 1969 and 1973, another indication of the greater difficulty in responding when one has stopped working and income sources become more complex. A very slight tendency for nonrespondents to be better educated was also apparent.

The income of persons responding in both years was generally a little lower than the income

TABLE IV—Employment status in survey week, 1969 and 1973, and education of respondent, by response on total money income, 1968 and 1972 Number and percentage distribution of respondents, by marital status and sex

Employment status and education of respondent	Total <sup>1</sup>		Married men and spouses		Nonmarried men		Nonmarried women	
	Reporting income <sup>2</sup>	Not reporting income	Reporting income <sup>2</sup>	Not reporting income	Reporting income <sup>2</sup>	Not reporting income	Reporting income <sup>2</sup>	Not reporting income
Total number	5 905	3 518	3 317	2,185	628	284	1,681	833
Total percent	100	100	100	100	100	100	100	100
<i>Employment status in survey week 1969 and 1973 <sup>3</sup></i>								
Employed in—								
1969 and 1973	41	40	48	47	39	34	32	29
1969 but not in 1973	34	37	37	39	32	40	27	30
1973 but not in 1969	2	2	2	1	3	1	2	2
Neither year	22	21	13	13	26	25	40	39
<i>Education of respondent</i>								
Elementary								
0-4	8	7	8	6	12	12	8	6
5-8	37	33	38	32	43	40	34	33
High school								
9-11	18	19	19	18	15	22	17	21
12	21	23	19	24	19	14	25	24
College	15	17	15	19	12	12	15	16
Not reported	0	1	0	0	0	1	1	1

<sup>1</sup> Includes a small number of surviving spouses

<sup>2</sup> All sources of income in both 1968 and 1972

<sup>3</sup> Not to be confused with employment status used elsewhere in this article,

which is based on earnings in the income year (1968 and 1972) and thus cannot be used for persons who gave incomplete income responses



TABLE V—Total money income, 1968 and 1972, by response and employment status, 1968 and 1972 (in current dollars) Number and percentage distribution of respondents, by marital status and sex

Total money income, 1968 and 1972	Total	Em- ployed in 1968 and 1972	Em- ployed in 1968 but not in 1972	Not em- ployed in 1968 or 1972	Other
<b>Married men and spouses</b>					
<i>Total money income, 1968</i>					
Total number responding in 1968 and 1972	3,316	1,561	618	257	880
Total percent.	100	100	100	100	100
\$0-4,999	25	20	18	69	24
5,000-9,999	41	42	43	24	43
10,000-14,999	21	22	26	6	22
15,000 or more	13	15	13	0	11
Median income	\$7,990	\$8,240	\$8,600	\$3,740	\$8,160
Total number responding in 1968 but not in 1972	1,096	386	244	88	378
Total percent.	100	100	100	100	100
\$0-4,999	21	19	17	58	20
5,000-9,999	41	43	41	31	42
10,000-14,999	24	22	29	10	25
15,000 or more	13	17	13	1	13
Median income	\$8,290	\$8,580	\$9,140	\$4,660	\$8,670
<i>Total money income, 1972</i>					
Total number responding in 1968 and 1972	3,317	1,562	618	257	880
Total percent.	100	100	100	100	100
\$0-4,999	21	16	37	51	26
5,000-9,999	41	33	44	37	39
10,000-14,999	20	25	14	7	21
15,000 or more	17	26	6	4	14
Median income	\$8,130	\$10,070	\$6,050	\$4,920	\$8,000
Total number responding in 1972 but not in 1968	669	233	100	55	281
Total percent.	100	100	100	100	100
\$0-4,999	19	11	31	35	19
5,000-9,999	33	26	41	47	33
10,000-14,999	24	29	17	16	25
15,000 or more	23	34	11	2	23
Median income	\$9,430	\$12,230	\$6,690	\$6,000	\$9,690

TABLE V—Total money income, 1968 and 1972, by response and employment status, 1968 and 1972 (in current dollars) Number and percentage distribution of respondents, by marital status and sex—Continued

Total money income, 1968 and 1972	Total	Em- ployed in 1968 and 1972	Em- ployed in 1968 but not in 1972	Not em- ployed in 1968 or 1972	Other
<b>Nonmarried men and women</b>					
<i>Total money income, 1968</i>					
Total number responding in 1968 and 1972	2,308	751	368	612	577
Total percent.	100	100	100	100	100
\$0-4,999	69	56	55	94	67
5,000-9,999	24	34	35	5	25
10,000-14,999	6	7	9	0	7
15,000 or more	2	3	0	1	1
Median income	\$3,130	\$4,610	\$4,620	\$1,270	\$3,390
Total number responding in 1968 but not in 1972	629	144	137	156	192
Total percent.	100	100	100	100	100
\$0-4,999	70	57	58	96	68
5,000-9,999	22	31	31	3	23
10,000-14,999	5	8	7	1	6
15,000 or more	3	3	4	1	3
Median income	\$3,610	\$4,380	\$4,520	\$1,310	\$3,760
<i>Total money income, 1972</i>					
Total number responding in 1968 and 1972	2,309	751	368	612	578
Total percent.	100	100	100	100	100
\$0-4,999	67	43	79	92	65
5,000-9,999	23	39	18	6	24
10,000-14,999	7	12	2	1	7
15,000 or more	3	6	1	0	4
Median income	\$3,240	\$5,780	\$2,720	\$1,930	\$3,460
Total number responding in 1972 but not in 1968	317	155	133	199	130
Total percent.	100	100	100	100	100
\$0-4,999	68	42	76	93	58
5,000-9,999	23	27	24	6	35
10,000-14,999	6	20	0	1	5
15,000 or more	3	11	0	0	2
Median income	\$3,210	\$6,080	\$2,610	\$1,950	\$4,280

<sup>1</sup> Distribution based on less than 100 cases

of persons responding in only one of the two years, as table V shows. The median 1968 income of married men responding in both years was \$7,990, their counterparts who responded in 1968 but not in 1972 had an income of \$8,290—4 percent higher. For nonmarried men and women, the median among those who did not respond in 1972

was 12 percent higher. The equivalent ratios for 1972 income (median among persons responding in both years, divided by the median among persons responding in 1972 only) were 1.16 for married men and .99 for nonmarried persons. The employment-status classifier does not seem to explain the differences in these ratios.