Women's Worklives and Future Social Security Benefits

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More women will earn social security benefits in their own right in the next 30 years than do so at present, their benefits will not necessarily rise in relation to men's benefits For this to occur, the ratio of women's earnings to men's would have to rise markedly or young women would have to work most of their lives

The earnings ratio has stayed nearly constant, for 25 years at least In this article, worklives of younger women are estimated from their own early experience plus the completed careers of women now retired Though their total labor-force activity before retirement age will be greater than that of these older women, the increase will not be sufficient to compensate for the lengthening benefit-computation period Benefits earned on their own records therefore will not supplant dependent and survivor benefits

MORE WOMEN ARE working than ever before, and for longer periods This rising labor-force activity has increased the proportion of women who will be entitled to social security benefits based on their own earnings records, as well as increasing their benefit amounts In addition, more paid work for women should reduce the drain on the system of paying dependent's benefits and should bolster the dignity and economic security of women

Unfortunately, it does not necessarily follow that women's changing worklives will be translated speedily into higher benefits for women, though more women will receive retirement benefits based on their own earnings Although women's worklives will lengthen, it is by no means obvious that they will lengthen fast enough or that women's earnings will rise high enough in the near future to compensate for the yearly expansion of the period over which earnings are averaged that is produced by the maturing of the social security system Dependent's benefits—particularly survivor benefits—thus will have an

important function in providing income for elderly women for some time to come.

It now seems almost certain that the present system of computing benefits will be superseded, for reasons unrelated to the topic of this article There is a good chance, however, that the new system will also incorporate a long averaging period Some of the effects of retaining such an accounting period, using the data in the social security record system, are discussed here On the basis of the worklives, earnings, and benefits of women now retiring or recently retired, along with the early experience of women now working, reasonable guesses can be made about the work experience of these younger women when they reach retirement Analysis is mostly confined to women who will retire before the end of the century Extensive projection beyond this seems foolhardy, given the uncertainties about the world in the 21st century

THE DATA

Both age and cohort effects must be taken into account in predicting the future from the past and the present Cross-section data about simultaneous labor-force participation of individuals of different ages therefore are not suitable, for conclusions from these data are restricted to age effects Longitudinal data—that is, histories of individuals—are necessary

The data used here come from the Continuous Work-History Sample (CWHS) maintained by the Social Security Administration This general-purpose research file contains longitudinal earnings and employment information on a 1-percent sample of persons with social security numbers whose earnings records are available in annual detail from 1951 and in cumulated form since 1937. The approximately 2 million records are not restricted to those who have worked in covered employment, since social security numbers are

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now required for tax purposes by the Internal Revenue Service Data on age, race, sex, number of quarters worked, quarterly earnings, and benefit amounts are available [1]

An abstract tape, specially prepared from the 1971 CWHS, is the main file used for this research The extracting device limited the records to every fifth birth cohort, starting with persons born in 1891 and ending with the birth cohort of 1946 The extract tape thus contains annual experience and earnings of workers the last digit of whose ages in 1971 was five or zero [2]

BENCHMARKS AND CONCEPTS

Women Now Retiring

The labor-force experience, earnings, and benefits of older women in relation to men of the same age will be used as a benchmark here Younger women and men can then be compared to see what improvements or changes have taken place or can be expected

Women born in 1896, 1901, and 1906 were aged 75, 70, and 65, respectively, in 1971 Unpublished census estimates, adjusted for undercount, give the numbers alive for each of those age groups in that year, since CWHS data do not permit an accurate estimate (See the Technical Note, pages 12–13, for details on this point and for the qualifications on the Bureau of the Census data) In these cohorts, 85–90 percent of all women are social security beneficiaries or known to be eligible for benefits The rest either have worked only minimally in covered employment, worked in employment covered by a public pension program other than social security, such as the Federal civil service, railroad retirement, and some State and local programs; are dependent on spouses not receiving benefits or are among the small minority not covered by any public pension program

Of women beneficiaries, even in these age groups, about half have their own retirement benefit (table 1) The rest have dependent's bene-

TABLE 1 —Social security beneficiary status and type of benefit for women born in 1896, 1901, and 1906, by age in 1971 Percentage distribution of women alive in 1971

Social security beneficiary status and type of benefit	Age in 1971		
	75	70	65
	Total alive in 1971		
Total number (in thousands)	568	706	858
Total percent	100	100	100
Not receiving benefits, eligibility status unknown	7	10	14
Eligible for social security benefits, but not receiving [1]	0	5	10
With social security benefits	93	85	76
	Persons with social security benefits		
Total number (in thousands)	527	595	648
Total percent	100	100	100
Retirement benefit	49	53	55
Dependent benefit	48	47	45
Wife	21	25	25
Widow	27	22	20
Other	3	--	--

[1] May be because of own or husband's work
Source Unpublished tabulations from the Bureau of Census, see Technical Note, page 13

fits only, either as widows or wives, with the proportion of widows naturally increasing with the age of the group This classification should be amplified somewhat About one-sixth of those with their own benefit also receive a supplemental dependent's benefit—the difference between their retirement benefit and what they are entitled to on the basis of the husband's earnings record Women receiving dependent's benefits or no benefits at all are not necessarily nonworkers; some worked a few quarters but not enough to qualify for a minimum benefit

To qualify for a minimum retirement benefit an individual must be fully insured The number of quarters required varies with year of birth For women, 1 quarter of coverage is needed for each calendar year elapsing between 1950 and the year in which she attains age 62 (or between age 21 and age 62 if she was born after 1930) with a minimum requirement of 6 quarters For men the upper age in 1971 was 65 [3]

For women born at the beginning of the century the 7 quarters required could have been achieved by working during a few holiday sea-

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[1] For some of the problems in using CWHS data for this kind of research, see the Technical Note, page 12

[2] Two other birth cohorts—1938 and 1943—were added to give more information about contemporary events Half the records on that tape were randomly selected for this research

[3] The 1972 amendments eliminated this difference Starting January 1973 and becoming fully effective in January 1975, the elapsed period for men is also measured to age 62 The benefit computation period for men and women also was equalized by these amendments

sons or summers For persons born more recently, the requirement involves a more prolonged commitment to the labor force In table 2, the number of women with at least 1 quarter of covered earnings is calculated as a percentage of all persons born 1896–1911 who had social security numbers Then of those persons with at least 1 quarter, the proportion who have insufficient coverage to be fully insured for a retirement benefit is calculated This proportion is just under 20 percent of women aged 75 in 1971, 25 percent of those aged 70, and 28 percent of those aged 65 For those aged 60 in 1971—who, of course, had some quarters left in which they could work before reaching age 62—33 percent had not yet fulfilled the requirement (22 quarters for this cohort)

In any case, about half of these older women worked enough to be eligible for at least the minimum social security benefit on their own wage records Their age in 1937, the year in which the program began, was one factor that determined whether or not they worked From table 2, it can be seen that, of those with social security numbers, the fraction that did no work at all was

much smaller for the younger than the older group

Benefits of Older Women

The primary insurance amounts (PIA's) of older women and men are shown in table 3 The PIA is the basic benefit amount against which actuarial reductions, dependent's benefits, family maximums, and the like are figured [4]

In tables 3 and 4, benefits of men and women born in 1901 and 1906 are compared The relevant periods used in figuring the PIA for these cohorts were 7 and 12 years for women and 10 and 15 years for men, respectively. The base relevant for these tables includes all workers entitled to social security benefits Persons who died before becoming entitled to benefits thus were not included, but, by the same token, neither were those who lived but did not work enough to be eligible for benefits

Table 3 shows that median PIA's are much lower for women than for men—$119, compared with $170 for the older group, and $125, compared with $178 for the younger group—about a 70-percent ratio The averages are closer—about a 79-percent ratio

Since the PIA reflects both annual covered earnings and the number of years with such earnings, the relative roles of tenure and wages should be considered The tenure distributions are very different for men and women in these cohorts Of the younger group, for example, about one-ninth of the women but almost one-third of the men worked 120 quarters or more

When years with covered employment are held constant, the medians for women are 90 percent of those for men Another method of controlling tenure was to standardize the women's PIA distribution by men's worklives (table 4) [5] This

TABLE 2 —Quarters worked, 1937–71, and number of quarters required for fully insured status for persons born in 1896–1911, by age in 1971 and sex Percentage distribution of persons in CWHS cohort

Quarters worked	Age in 1971							
	75		70		65		60	
	Women	Men	Women	Men	Women	Men	Women	Men
	Total							
Total number (in thousands) _	776	1,005	853	1 007	1 035	1,172	1 147	1,249
Total percent _	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0
None ___ __ _ _	35 5	11 9	29 6	9 0	23 7	8 1	17 5	7 6
At least 1 quarter_	64 5	88 1	70 4	91 0	76 3	91 9	82 5	92 4
	Persons with at least 1 quarter							
Total number (in thousands)__ _	500	885	601	917	790	1,078	946	1 153
Total percent	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0
Enough to be fully insured _ __ _	80 2	89.3	75 4	88 8	71 6	88 2	66 9	85 9
Not enough__ __	19 8	10 7	24 6	11 2	28 4	11 8	[1]33 1	[1]14 1
Number required ___	7	10	12	15	17	20	22	24

[1] There were 8 more quarters in which women in this age group could earn fully insured status by age 62, and 20 more for men by age 65 Some in this group might still work enough to get insured status and become entitled to a benefit

Source Special CWHS tabulations

[4] The PIA is determined by formula from a worker's average monthly earnings (AME) The AME is a worker's taxable earnings in the years between 1950 (or the 21st birthday if later) and the year of the 62d birthday—less the 5 lowest earnings years—divided by the number of months in the computation years The period will reach a maximum of 35 years for men and women in 1990

[5] The distributions of the PIA's for women who had worked a given number of quarters, say 1–29, were weighted by the proportion of men who had worked that much (15 1 percent of those aged 65) These PIA distributions were then summed to give the "standardized" distributions

TABLE 3 —Primary insurance amount (PIA) in 1971 for persons born in 1901 and 1906, by quarters worked, age in 1971, and sex Percentage distribution of persons in CWHS cohort with PIA

Primary insurance amount	Number of quarters worked											
	Women						Men					
	Total	1-29	30-59	60-89	90-119	120 or more	Total	1-29	30-59	60-89	90-119	120 or more
Aged 70 in 1971												
Total number (in thousands)	340	81	103	84	50	22	624	55	127	160	175	106
Percentage distribution	100 0	23 8	30 3	24 8	14 7	6 4	100 0	8 8	20 4	25 8	28 1	17 0
Total percent	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0
$70 40	23 6	76 8	15 7	2 1	0	0	6 8	56 2	8 5	5	0	0
70 50-109 99	19 3	13 6	34 8	18 0	7 2	9	11 7	23 4	31 6	10 8	1 5	2
110 00-149 99	27 5	7 7	27 6	42 4	36 4	22 9	20 0	15 7	31 8	31 6	11 6	3 9
150 00-189 99	19 9	1 7	14 0	25 1	42 8	42 2	40 3	4 8	24 8	41 3	65 1	34 7
190 00-209 99	6 8	3	6 4	7 6	12 0	17 4	13 6	0	2 7	8 2	16 1	37 6
210 00 or more	2 9	0	1 6	4 7	1 6	16 5	7 7	0	6	7 5	5 7	23 6
Median	$119 03	$70 40	$109 46	$136 42	$156 67	$177 50	$170 18	$70 40	$121 06	$158 80	$179 34	$195 93
Aged 65 in 1971												
Total number (in thousands)	438	66	121	128	76	47	765	41	100	198	179	247
Percentage distribution	100 0	15 1	27 7	29 2	17 4	10 7	100 0	5 3	13 1	25 9	23 4	32 2
Total percent	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0
$70 40	18 8	79 4	22 9	1 7	0	0	4 8	56 2	13 0	4	1	0
70 50-109 99	21 3	6 4	38 6	23 5	6 6	9	10 2	21 2	39 1	13 7	1 6	0
110 00-149 99	24 5	3 9	23 9	31 9	32 9	20 6	17 1	18 7	28 4	30 0	15 5	3 1
150 00-189 99	20 4	3	9 6	23 0	39 7	38 2	29 0	3 9	17 0	34 1	46 3	21 3
190 00-209 99	7 5	0	3 5	8 1	11 8	20 2	25 2	0	2 4	16 3	26 7	44 8
210 00 or more	7 5	0	1 5	11 7	9 0	20 2	13 7	0	2	5 6	9 8	30 9
Median	$125 20	$70 40	$97 60	$140 14	$161 27	$181 17	$178 31	$70 40	$108 19	$157 76	$181 78	$201 47

Source Special CWHS tabulations

standardization explained 43 percent and 55 percent of the difference in the medians in the two cohorts and 53 percent and 60 percent of the difference in the averages, as the tabulation that follows indicates Besides changing the measures of central tendency, the main effect of the standardization was to remove the cluster of women at or near the minimum benefit The greatest expansion was in the middle section of the distribution If women in these cohorts had worked as long as men did but continued to be paid as

Median and mean PIA	Aged 70 in 1971	Aged 65 in 1971
Median		
Women	$119 03	$125 20
Standardized for men's worklife	141 06	154 68
Men	170 18	178 31
Difference between men and women		
Total amount	51 15	53 11
Percent explained by standardizing	43 1	55 5
Mean		
Women	$124 02	$130 73
Standardized for men's worklife	141 49	151 40
Men	156 15	165 35
Difference between men and women		
Total amount	32 13	34 62
Percent explained by standardizing	54 4	59 7

women were, the effect would be to reduce the number with benefits at or near the minimum

The difference in benefits that remains after tenure has been adjusted is attributable to difference in taxable earnings within tenure groups This effect would loom larger if men's total earnings were included in computing of AME's and PIA's In the period under discussion, only about 60 percent of the men had all their earnings below the taxable maximum, compared with 92 percent of the women In the very recent past, the taxable maximum has risen more rapidly than average earnings and more of the men's earnings enter into the computation of benefits In the future, therefore, the effect of tenure on relative benefits may not be so great, in relation to the effect of earnings levels

More than half of these older women, then, have benefits in their own right Among women with benefits, the PIA's were just under 80 percent of men's on the average, largely because they worked fewer quarters during the relevant period

Attention turns now to a comparison with future social security beneficiaries

PREDICTIONS FOR YOUNGER WOMEN

It is safe to say that women now entering middle age will have worked more total years in covered employment than women just retired The younger women's retirement benefits may or may not change accordingly

Under the present system, if the relationship between the AME of men and women remains about the same, so will the relationship between their benefit levels This is a fundamental property of the present PIA formula If younger women's benefits are to be higher in relation to those of men than older women's benefits, there must be changes in their AME's in relation to those of men A change must come through women's annual taxable earnings and/or the number of years they spend in covered employment, in relation to men

Earnings

It is not likely that AME's will change through the earnings relationship, if the recent past is a guide The constancy of women's earnings relative to men's is shown in table 5 In this table,

TABLE 4—Primary insurance amount (PIA) in 1971 for persons born in 1901 and 1906, by age in 1971 and sex, with women's PIA standardized for men's worklives Percentage distribution of persons in CWHS cohort with PIA

Primary insurance amount	Aged 70 in 1971			Aged 65 in 1971		
	Women	Men	Women's PIA standardized for men's worklives	Women	Men	Women's PIA standardized for men's worklives
Total number (in thousands)	340	624	340	438	765	438
Total percent	100 0	100 0	100 0	100 0	100 0	100 0
$70 40	23 6	6 8	9 8	18 8	4 8	7 1
70 50–89 99	8 1	4 1	5 3	8 4	3 6	4 3
90 00–109 99	11 3	7 6	9 5	12 9	6 6	9 5
110 00–129 99	15 7	10 4	17 6	13 0	8 2	12 5
130 00–149 99	11 8	9 6	14 2	11 5	8 9	13 4
150 00–169 99	9 1	11 2	13 1	10 3	10 0	13 9
170 00–189 99	10 8	29 1	16 2	10 1	19 0	15 3
190 00–209 99	6 8	13 6	9 9	7 5	25 2	12 0
210 00 or more	2 9	7 7	4 6	7 5	13 7	12 0

Source Special CWHS tabulations

TABLE 5—Estimated median annual earnings, by sex, 1937–74

Year	Median earnings					
	All wage and salary workers			4-quarter wage and salary workers [1]		
	Women	Men	Ratio of women's earnings to men's	Women	Men [2]	Ratio of women's earnings to men's
1937	$484	$945	0 510	[3]	[3]	[3]
1940	472	935	505	$757	$1,353	0 560
1945	770	1,654	466	1,347	2,560	526
1950	1,124	2 532	444	1,862	3,212	580
1951	1,162	2,810	419	1,920	3,502	548
1952	1,239	3 031	409	2,065	3,731	554
1953	1,338	3,258	411	2,181	3,973	549
1954	1,359	3,250	418	2,195	3 977	552
1955	1,338	3 348	400	2,251	4,197	536
1956	1,451	3,752	406	2,346	4,355	539
1957	1,544	3 575	432	2,454	4,343	565
1958	1,581	3 548	446	2,528	4,424	572
1959	1,639	3,780	434	2,642	4,680	565
1960	1,676	3,875	433	2,706	4,837	559
1961	1 736	3 919	443	2,776	4,950	561
1962	1,809	4 112	440	2 876	5 139	560
1963	1,851	4,239	431	2 956	5,298	558
1964	1 941	4,449	436	3,063	5,629	544
1965	1,979	4 630	427	3 166	5,739	552
1966	2,077	4,902	424	3 338	6,124	545
1967	2,276	5,179	440	3,509	6,398	549
1968	2,434	5 448	447	3,762	6,819	552
1969	2,554	6 038	423	3 972	7,457	533
1970	2,746	6,120	448	4,256	7 602	560
1971	2 900	6,527	444	4,482	8,158	549
1972 [4]	3 005	6,945	433	4,740	8,798	539
1973 [4]	3,170	7,475	424	4 976	9 436	527
1974 [4]	3,430	7,980	430	5,355	10,055	533

[1] Workers with earnings reported in each calendar quarter or who earned the prevailing maximum annual taxable wages
[2] Median wages above the prevailing maximum annual taxable wages reflect the estimated distribution of workers in wage intervals above the maximum
[3] Data not available
[4] Preliminary data

Source Social Security Bulletin, Annual Statistical Supplement, 1973, table 39

earnings are not constrained by the taxable maximum; estimated total earnings are used to calculate the medians Since 1950 the ratio of women's median earnings to men's has fluctuated within the very limited range of 40–45 percent When 4-quarter workers are compared the ratio moves up about 10 points with the elimination of the many seasonal workers whose annual earnings give a downward bias to those of all women. It still varies only from 52–58 percent over the entire period

Many reasons for this trend (or lack of one) have been suggested Usually the profound changes in women's labor-force patterns that have taken place since World War II are cited Yet none of the changes—rises in average earnings, for example—that have taken place in the last 20 years has affected the ratio It does not seem prudent then to expect with confidence that the ratio will soon begin to rise The rapid rise of

the taxable maximum is bringing the distribution of taxable earnings close to that of total earnings It will, if anything, depress the women/men ratio of taxable earnings that until recently has been relatively high

Labor-Force Participation

If the relationship between the AME's and PIA's for men and women changes, it will be because of women's increased labor-force participation, not a change in the earnings ratio The number of years women work, in relation to their computation periods, will have to increase with respect to the number of years men work, in relation to their computation period The average number of years worked by older women and the relevant computation periods are known, but, of course, the average number of years women currently employed will accrue in the years before they retire is not

In deducing behavior of younger women from that of older women, as mentioned before, both an age and a cohort effect must be considered since labor-force participation of women varies both with their age and with the generation into which they were born When covered employment is dealt with, an important special aspect of the cohort effect must be considered—namely, the coverage effect From 1950 to 1951, social security coverage made its most dramatic increase in a single year, rising from about 64 percent of the paid labor force to almost 80 percent when coverage was extended to include persons in self-employment, domestic service, and some persons employed in nonprofit organizations and State or local government Before and after that year, covered employment as a proportion of the paid labor force increased by a small percentage each year Now 90 percent of the paid labor force is covered

To control for the coverage effect, men are included in tables 6 and 7 Even this precaution does not fully distinguish between coverage and true cohort effect, since the differential effects of coverage expansion on men and women are not known

To estimate the labor-force behavior of younger women between now and the time they retire, it is helpful to think of an array, with three out of the four entries known

Work in—	*Labor-force behavior*
Early period	
Older women	Known
Younger women	Known
Later period	
Older women	Known
Younger women	Unknown

It is assumed for the moment that the function relating work in early years to work in later years will be the same for younger as it has been for older women This assumed constancy in the age effect will be examined later

The number of quarters worked at specified young ages for two "generations" of men and women, born 20 years apart, is shown in table 6 for those born in 1906 and 1926, 1911 and 1931, and 1916 and 1936 The ages at which they are compared—"early" and "late"—are dictated by the data source, which, as mentioned, provides

TABLE 6 —Quarters worked for persons born in 1906-37,[1] by year of birth (20 years apart), age interval, and sex Percentage distribution of persons in CWHS cohort

Quarters worked	Age and year of birth					
	31–44		26–39		21–34	
	1906	1926	1911	1931	1916	1936
	Women					
Total number (in thousands)	1,035	1,425	1,147	1,235	1 292	1,217
Total percent	100	100	100	100	100	100
None	45	32	39	25	34	16
1–9	21	17	23	21	25	25
10–19	11	12	13	17	15	20
20–29	8	9	9	12	11	13
30–39	6	8	7	9	7	10
40–49	4	8	4	7	4	9
50–56	6	12	5	9	3	7
Mean	11 5	17 5	11 9	17 3	11 7	18 4
	Men					
Total number (in thousands)	1 172	1,462	1 249	1 298	1,432	1 303
Total percent	100	100	100	100	100	100
None	21	15	19	10	17	7
1–9	14	6	14	5	16	6
10–19	10	4	10	4	14	4
20–29	10	5	12	4	14	5
30–39	10	5	13	7	15	7
40–49	13	10	14	11	14	17
50–56	22	55	18	57	10	53
Mean	25 9	39 0	25 6	40 9	23 0	41 4

[1] For persons born in 1906, 1911, and 1916, quarters worked refer to 1937-50, for those born in 1926 1931, and 1936, quarters worked refer to 1957-70
Source Special CWHS tabulations

TABLE 7 —Years with earnings credits before 1951 for persons born in 1906, 1911, and 1916, by number of years with earnings credits, 1951-71, and sex Percentage distribution of persons in CWHS cohort

Years with earnings credits, 1951-71	Years with earnings credits before 1951													
	Women							Men						
	Total	None	1-4	5-8	9-12	13-14	Mean	Total	None	1-4	5-8	9-12	13-14	Mean
1906														
Total number (in thousands)	1,035	417	260	165	99	94	3 9	1,172	212	194	169	237	359	7 6
Total percent	100	100	100	100	100	100		100	100	100	100	100	100	
None	35	51	39	20	12	3	1 7	17	36	35	19	8	1	3 1
1-4	15	15	18	17	9	5	3 8	7	10	9	9	7	4	6 0
5-8	11	9	11	14	13	8	4 2	8	9	8	9	10	6	7 2
9-12	10	8	10	12	15	12	4 6	10	9	9	13	11	9	7 7
13-16	10	8	9	12	12	13	4 8	13	16	13	12	14	11	7 1
17-20	11	6	9	15	21	27	6 6	23	15	16	21	26	29	9 0
21	9	2	6	11	18	33	8 3	23	6	10	17	26	41	10 6
Mean	7 5	4 5	6 4	9 4	12 1	15 7		12 7	8 1	8 6	11 4	14 3	17 0	
1911														
Total number (in thousands)	1,147	401	319	205	136	87	4 2	1,249	201	201	197	310	340	7 7
Total percent	100	100	100	100	100	100		100	100	100	100	100	100	
None	29	42	35	21	9	2	2 1	16	38	41	17	4	1	2 9
1-4	15	19	16	15	11	5	3 2	7	13	8	7	5	3	5 2
5-8	12	17	12	12	11	8	3 8	7	9	7	8	7	4	6 5
9-12	10	9	10	13	12	9	4 4	7	6	8	8	8	6	7 7
13-16	11	9	11	11	15	13	4 8	11	13	11	13	12	8	7 2
17-20	11	8	10	14	18	17	5 4	18	16	15	19	20	18	8 0
21	12	2	6	15	24	47	8 7	34	6	11	28	44	60	10 8
Mean	8 4	5 7	6 9	9 9	12 8	16 5		13 4	7 6	8 8	12 8	16 1	18 0	
1916														
Total number (in thousands)	1,292	352	412	270	175	81	4 4	1,432	199	254	285	418	276	7 4
Total percent	100	100	100	100	100	100		100	100	100	100	100	100	
None	27	39	33	20	8	3	2 5	17	44	40	14	3	1	2 8
1-4	17	21	17	15	12	9	3 6	6	12	8	7	3	1	4 5
5-8	12	11	13	14	11	12	4 5	6	8	7	7	4	3	5 9
9-12	11	10	10	12	12	8	4 6	6	7	7	8	6	4	6 8
13-16	12	10	11	13	15	12	5 0	10	13	11	12	8	6	6 2
17-20	12	7	10	14	18	20	6 0	17	12	16	21	19	16	7 6
21	10	2	6	11	23	36	8 2	38	4	11	30	57	68	10 8
Mean	8 4	5 5	7 0	9 3	12 6	14 8		13 7	6 5	8 8	15 4	17 6	18 8	

Source Special CWHS tabulations

only cumulative work histories for the years 1937-50 The comparable years for the younger generation are 1957 and 1970 The base is all persons with social security numbers in a given birth cohort The unreported deaths that affect the CWHS data are assumed to have minimal effect here since the cohorts are only of interest when relatively young

The average number of quarters worked increases between the generations by about 50 percent for women for each of these early age intervals (from about 12 to about 18 quarters) and 60 percent for men (from about 25 to about 40 quarters). This increase combined a cohort effect and a coverage effect and may be largely an artifact of the coverage effect It is unnecessary to

separate these two effects, however, for the increase did occur and, though it had a one-time effect, may be expected to be permanent

In table 7, the early working lives of women born 1906-16 are cross-tabulated with their later working lives The overall mean numbers of years worked in the early period were 3 9, 4 2, and 4 4—a weighted average of 4 2—and in the later period they were 7 5 and 8 4—an average of 8 1 These older women worked from 11 4 years to 12 8 years in the 35-year period studied (12 3, on the average).

Raising the early participation by 50 percent would give a new mean—from 5 9 to 6 6 years, for the later period 1951-71, the mean for these cohorts would be about 9 5-10 years That is,

older women who worked about 6 years (as shown in the column for 5-8 years) at early ages worked, on the average, nearly 10 at later ages Younger women, by the same reasoning, might therefore be expected to work around 16 years out of the total period of 35 years, as the figures below indicate

Years of work	Mean years worked	
	Women	Men
Older generation (born in 1906, 1911, and 1916)		
Total.	12 3	20 9
1937-50...	4 2	7 6
1951-71	8 1	13 3
Younger generation (born in 1926, 1931, and 1936)		
Total....	15 8	28 7
1957-70 [1]....	6 3	12 2
Next 21 years [2]..	9 5	16 3

[1] Estimates based on 4 2 years for older generation (for women, 150 percent, for men, 160 percent)
[2] Estimates based on data in table 7 (for women, column for 5-8 years, for men, column for 9-12 years)

The number of years over which earnings are averaged increased dramatically, as the figures that follow show

Year of birth	Computation period (in years)
Women	
1906	12
1911	17
1916	22
1926	32
1931	35
1936	35
Men	
1906	15
1911	20
1916	22
1926	32
1931	35
1936	35

Women born in 1906 worked an average of more than 11 years in the period 1937-71 when the benefit computation period was based on 12 years of earnings For women and men to retain at least the same PIA ratio, with no decline in the earnings ratio, younger women will have to work most of their lives This seems extremely unlikely—if the above trends are taken into account

Turning now to the assumed constancy of the age effect, the question is Is it likely that younger women will expand their labor-force participation from early to later periods in their lives more than older women did? The answer to this question is, of course, somewhat subjective

In table 8, cohorts were compared in 5-year age intervals The number of quarters worked in each 5-year interval between 1951 and 1970 was comparable both across and within cohorts The base used was the number alive at the beginning of each 5-year period—that is, 1951, 1956, 1961, and 1966—using the Bureau of the Census estimates described earlier Quarters of coverage were obtained from Social Security Administration data, and differences from Bureau of the Census totals were assumed to be for persons with no quarters of coverage

The most pervasive effect for these cohorts during this period, according to the table, was

TABLE 8 —Quarters worked, 1951-70 (in 5-year periods) for persons born in 1891-1926, by year of birth Percentage distribution of women alive at beginning of age interval

Age interval and quarters worked	Year of birth							
	1891	1896	1901	1906	1911	1916	1921	1926
60-64, total number [1]	730	804	821	925	..	.	....	.....
Total percent ..	100 0	100 0	100 0	100 0	..	..	..	....
0	69 5	63 0	60 5	55 1	.	...	....	.....
1-9.	12 1	11 7	12 7	12 6	..	...	....	. ..
10-19	9 8	11 9	12 9	16 5	.....	....	.	.....
20	8 5	11 4	13 9	15 8	..	.	.	.....
Mean	3 7	4 8	5 2	6 3	....	... .	. ....	. ...
55-59, total number [1]	.	842	878	964	1,059	. .	...	.... .
Total percent .	. ..	100 0	100 0	100 0	100 0	.	.. ..	.....
0	.. ..	63 8	58 1	50 5	46 5	.	....	. ....
1-9	.	13 2	12 3	12 8	13 0	..	. ...	. . ..
10-19..	.	11 9	13 5	14 4	17 2		. ...	. ...
20	..	11 2	16 1	22 3	23 3	...	....	. ...
Mean	.. .	4 6	5 7	7 1	7 7	..	....	. ...
50-54, total number [1]	.. .	.. .	905	994	1,089	1,138	..	.... .
Total percent .	.	..	100 0	100 0	100 0	100 0	......	....
0	.	...	58 7	49 7	46 5	40 5	.. .	.....
1-9	.	.	15 0	14 7	14 7	14 8	.. .	.....
10-19	. .	..	13 9	15 5	15 9	20 4	. .	.....
20	. .	...	12 4	20 1	22 9	24 3	. ..	.. ..
Mean	. ...	. ..	5 2	6 9	7 5	8 4	.. ..	....
45-49, total number [1]	.	.. .	.. .	1,011	1,094	1,157	1,253	.. ...
Total percent ..	....	.. .	.. .	100 0	100 0	100 0	100 0	....
0	.. .	..	.. .	51 9	46 9	42 0	33 3	..
1-9	..	...	... .	18 0	17 2	16 9	18 1	....
10-19	..	.	... .	15 3	17 1	18 4	22 9	.....
20	..	.	. ..	14 8	18 8	22 7	25 3	.....
Mean	. .	.	. ...	6 0	7 0	8 0	9 5	.....

See footnotes at end of table

Age interval and quarters worked	Year of birth							
	1891	1896	1901	1906	1911	1916	1921	1926
40-44, total number [1]		--	-	--	1,103	1 167	1 263	1 267
Total percent			-	--	100 0	100 0	100 0	100 0
0	--	--	--	--	50 7	43 4	39 4	36 1
1-9	--	--	--		19 3	20 5	19 7	20 7
10-19	--	--	--		16 9	18 6	20 4	22 1
20		-			13 1	17 5	20 5	21 1
Mean	-	--		--	5 9	7 1	7 9	8 3
35-39, total number [1]	--	-		-	-	1,170	1,285	1,268
Total percent	-	-	--	-	-	100 0	100 0	100 0
0	--	--	-	-	-	48 0	44 0	43 9
1-9	--	--	-	-	--	22 6	22 3	21 7
10-19	-		---	-	-	17 8	19 5	19 4
20	-	-		-	-	11 6	14 2	15 0
Mean	-	-	-	--	--	5 9	6 7	6 8
30-34, total number [1]	-	-		--	--	--	1,280	1,246
Total percent	-	--	- -	-	-	-	100 0	100 0
0	--	-	-	--	-	-	45 0	46 9
1-9	-	-	-	-	-	-	26 6	23 9
10-19	-	-	--	-	-	-	18 8	18 5
20	-	-	-	-	-	-	9 6	10 7
Mean	-	-	-	---	-	-	5 8	5 9
25-29 total number [1]	-	--	--	-	---	---	--	1,232
Total percent	-	--	-	-	--	--	-	100 0
0	-	-	--	---	--	--	--	38 6
1-9	-	-	--	-	--	--	--	32 2
10-19	-	-	--	-	---	-	-	21 1
20	-	-	--	-	--	-	--	8 1
Mean	-	-	-	-	- --			6 1

[1] Alive at beginning of age interval

the decrease in the proportion of those in each age interval who did no work during a given 5-year period The drop is sharpest for those aged 45–49, where the proportion went from more than half for the cohort born in 1906 to one-third for the cohort born in 1921 The proportion of persons who worked in all 20 possible quarters in a 5-year period also changed sharply for some intervals, particularly for those aged 50–54, where the proportion doubled during the 20 years

Even with the substantial age and coverage effects experienced by this particular generation, the average number of years worked did not change as much as might be expected The averages are changing, both within and across cohorts throughout the period, but not enough to signal a significant change in the average relative bene-

fit positions of men and women In order for such a change to come about, it appears women now middle-aged will have to experience a much greater age effect in their labor-force participation than seems likely

Fully Insured Status

Thus far this article has been concerned with average benefits for women in relation to those for men A further question may be raised about the number of women who might have benefits in their own right by 1990 Table 9 shows the required number of quarters needed for fully insured status and the number of quarters actually accrued at given ages

Of the women aged 50 and older, more than half had fully insured status by 1971 Of those aged 50, at least another 10 percent would probably be fully insured before retirement, since they were within 10 quarters of fulfilling the requirement in 1971 For women aged 35, 40, and 45, it appears that the proportion with fully insured status may be near 60 percent by retirement age, based on the data in this table

TABLE 9 —Quarters worked, 1937–71, and number required for fully insured status for persons born in 1896–1936, by age in 1971 Percentage distribution of women in CWHS cohort
[Workers represented in figures below bold line in each column have enough quarters of coverage to be fully insured in 1971]

Quarters worked	Age in 1971								
	75	70	65	60	55	50	45	40	35
Total number (in thousands)	776	853	1,035	1,147	1,292	1,481	1,425	1,235	1,217
Total percent	100	100	100	100	100	100	100	100	100
0	35	30	24	18	15	11	10	8	8
1-6	13	12	12	12	12	11	11	11	13
7-11	6	5	5	6	6	7	7	7	9
12-16	5	5	4	5	6	6	6	8	10
17-21	4	4	5	4	5	5	6	8	9
22-26	4	4	4	4	4	5	6	8	8
27-31	3	3	3	4	4	5	6	7	7
32-36	3	3	3	4	4	4	5	7	6
37-39	1	1	2	2	2	2	3	4	3
40 or more	25	32	39	42	43	43	39	33	26
Percent fully insured by 1971	51	52	56	56	53	49	42	33	26
Number required	7	12	17	22	27	32	37	40	40

Source Special CWHS tabulations

Women Born Since 1936

The labor-force activity of much younger women, who will retire after the year 2000, is examined in table 10 Like table 8, it divides the 20-year period into subperiods and presents quarters worked for cohorts in each 5-year age interval This table includes the cohorts born in 1938 and 1943 The base is the number in the CWHS cohort (mortality was considered of minimal importance for this age group), making it unnecessary to combine two independent sets of data [6]

Length of time in the labor force is also increasing for women in the childrearing years, although from a lower base, as the table shows As might be expected, a much smaller percentage of each age group works 20 quarters out of any 5-year interval The average number of years worked is clearly rising The percentage rise is comparable with that between the 1906 and 1926 cohorts If the same age effect obtains, then it is likely that these cohorts, now in their twenties and thirties, will alter their benefit position relative to men

SUMMARY AND CONCLUSIONS

The change in women's labor-force participation, about which so much has been heard, has affected all age groups Along with the changes occurring within this generation, coverage was extended to additional occupations Consequently, for those born in the third and fourth decades of this century, the number of quarters in covered employment worked in their twenties and thirties was higher than the number for those born 20 years earlier—about 50 percent higher for women and 60 percent for men

Older women increased their work rate in their forties and fifties, and it is likely that younger women will do the same or more Younger women are not likely to spend enough more years in the labor force to better the relative position of women over the next 25 years with respect to average benefit level if the social security program retains a long averaging period It seems quite reasonable to predict, nevertheless, that more

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* Because different bases were used in tables 8 and 10, cohorts appearing in both tables have slightly different distributions

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TABLE 10 —Quarters worked, 1951–70 (in 5-year periods) for persons born in 1916–46, by year of birth Percentage distribution of women in CWHS cohort

Age interval and quarters worked	Year of birth								
	1916	1921	1926	1931	1936	1938	1941	1943	1946
Total number (in thousands)	1 292	1,481	1,425	1,235	1 217	1,290	1 374	1 561	1,760
35–39, total percent	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0
0	52 9	51 4	50 1	48 0	--	--		--	--
1–9	20 8	19 4	19 3	24 2	-	-	-	--	--
10–19	16 2	17 0	17 3	17 6	-	-		--	--
20	10 5	12 3	13 3	10 3	--	-	-	--	--
Mean	5 4	5 8	6 0	5 7				-	--
30–34, total percent		100 0	100 0	100 0	100 0			--	---
0	--	52 5	53 5	48 0	39 4			-	-
1–9	-	23 0	20 9	24 2	26 7	-		-	--
10–19	-	16 2	16 2	17 6	22 2	-		--	-
20	-	8 3	9 3	10 3	11 6			-	-
Mean	-	5 0	5 2	5 7	6 7			--	--
25–29, total percent	-		100 0	100 0	100 0	100 0	100 0	-	---
0	-	-	46 9	45 1	43 1	37 5	33 0	-	-
1–9	-	-	27 8	28 3	28 0	30 8	31 1	-	-
10–19	-	-	18 3	18 6	20 6	21 9	25 6	-	-
20	-	-	7 0	7 9	8 4	9 8	10 0	-	-
Mean	-		5 5	5 6	5 9	6 7	7 1	--	--
20–24, total percent	-		-	100 0	100 0	100 0	100 0	100 0	100 0
0	-	-	-	29 2	27 0	26 7	25 3	19 6	14 5
1–9	-	-	-	35 4	36 2	35 6	35 8	36 0	34 2
10–19	-	-	-	26 4	28 9	29 8	30 7	35 6	41 6
20	-	-	-	8 9	7 9	7 9	8 1	8 7	9 6
Mean	--	-	-	7 2	7 4	7 7	7 7	8 5	9 5

Source Special CWHS tabulations

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women will be eligible for benefits in their own right, even if such an averaging period is retained

Women's benefits for the most part, will continue, however, to be less than men's and as widows their dependent's benefits will be more than their benefits as retired workers Under the present system or any system with a long averaging period, this means that women's earned benefits will not supplant dependent's benefits or survivor benefits Only if some proposal to "fill in" the gaps in women's earnings records is adopted will this situation change

Technical Note

*Problems with main data base —*Persons familiar with the Continuous Work-History Sample (CWHS) maintained by the Social Security Administration realize some of the problems in using this data source for labor-force analysis, rich though it is in longitudinal information Some of the problems are

1 Only earnings up to the social security taxable maximum are included This limitation tends to overstate the earnings ratio of women to men since men are more likely than women to have earnings above the maximum that are not recorded In 1974, for example, 25 percent of the men but only 3 percent of the women with taxable earnings earned the maximum

2 Earnings records are restricted to employment covered and reported Most jobs have been covered since the early 1950's, primary exceptions being the Federal civil service and certain State and local government jobs Reporting also is fairly universal Nonreporting, however, occurs disproportionately in some occupations, such as domestic service

3 Part-time workers are not distinguished from full-time workers For wage and salary workers, $50 in reported earnings in a calendar quarter is all that is required to obtain coverage for that quarter For self-employed workers, if $400 net income is reported during the year, 4 quarters are imputed, otherwise none (A farm worker is credited with 1 quarter of coverage for every $100 paid to him in cash during the year)

4 Other demographic characteristics are not available in these records Particularly damaging to the present investigation is the omission of marital status

5. No information on unemployment distinct from the absence of wage credits for any other reason is given

6 Deaths often are not reported to the Social Security Administration unless a survivor or lump-sum benefit is payable or there is some change produced in a benefit already being paid Still less often are they reflected in the CWHS The total number of persons in a birth cohort as it ages is thus exaggerated, particularly for older women workers who are less likely than men to have a benefit based on their own earnings Bureau of the Census estimates thus are used in the article, where necessary, to correct for such distortion

In spite of these limitations, no source besides the CWHS is available at present that provides detailed work and earnings histories over an extended period for so many workers, representing such a large number of age cohorts

Limitations of Census estimates —The numbers used as a base for the figures in tables 1 and 8, as estimated by the Bureau of the Census, were used in deriving the population estimates published in *Current Population Reports*, Series P-25, Nos 310 and 519 They are presented with the following qualifications suggested by the Bureau· "These estimates are not considered official intercensal estimates for the dates shown. The adjusted estimates are based on coverage rates for the various censuses which are not entirely consistent although the coverage rates for adjacent censuses are relatively comparable Accordingly, the adjusted estimates are subject to revision as additional research is carried out "