

Work Experience and Earnings of Middle-Aged Black and White Men, 1965-71

by Julian Abbott*

This article compares the work experience and earnings of a group of middle-aged black and white men over the period 1965-71. Differences in the likelihood of holding full-time/full-year jobs, in receiving comparable earnings, and in reducing labor-market activity were examined in relation to health, education, and occupation. Much similarity between the races was found in the frequency with which health affected work, but black men were clearly disadvantaged with respect to education and occupation. Even when these characteristics were similar, black men were less likely than white men to hold full-time, full-year jobs; when they did, they tended to have lower earnings. Racial differences in the proportion of full-time, full-year workers were smaller in 1971 than in 1965, but this shift resulted from a sharper decrease in full-time, full-year work among whites than blacks as they became older rather than from an increase in such employment among blacks. Even though the percentage increase in median earnings of blacks was greater than that for whites, their 1970 median earnings did not reach the level of the 1965 median earnings of white men. The implications of these findings are that older black men share little, if at all, in the reported labor market and economic gains realized by young black workers. As a result, overall differences in retirement benefits between blacks and whites are likely to continue into the foreseeable future.

Concern is often expressed over the differences in social security benefits received by blacks and whites, and over whether blacks are making any gains relative to whites. The primary factors that determine the basic benefit a worker receives under the social security program are the extent of employment and the level of earnings over the person's working lifetime. These factors are important even as one becomes older and nears retirement, since the level of covered earnings that may be used in computing benefits usually rises over the years and the inclusion of higher earnings has a positive effect on the worker's primary insurance amount (PIA).¹ At the same time, however, studies and census

data show that during late middle-age the labor-force activity and earnings of many workers begin to decline, often for health reasons.²

Sizable gains have been recorded in recent years in the labor-market activity of blacks, both in terms of increased employment opportunities and increased earnings.³ In general, most of these gains have been realized by young workers, who are better educated and possess a greater variety of skills than do older workers.

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¹ The PIA, which is based on average monthly earnings over a specified period, is the monthly amount payable to a disabled worker or to a retired worker who first receives benefits at age 65. This amount is used as a base for computing all types of benefits payable on the individual's account.

² Virginia Reno, "Why Men Stop Working Before Age 65," in *Reaching Retirement Age: Findings From a Survey of Newly Entitled Workers, 1968-70* (Research Report No. 47), Office of Research and Statistics, Social Security Administration, 1976; and Gayle B. Thompson, "Work Experience and Income of the Population Aged 60 and Older, 1971," *Social Security Bulletin*, November 1974, pages 3-20.

³ Richard B. Freeman, *Black Economic Progress After 1964: Who Has Gained and Why?* (Working Paper No. 282), National Bureau of Economic Research, November 1978. See also, National Commission for Manpower Policy, *The Economic Position of Black Americans: 1976* (Special Report No. 9), July 1976.

For example, the tabulation below, taken from a report by Freeman,⁴ shows that the black-to-white median

Age	Black-to-white median income ratio of full-time full-year workers	
	1967	1976
20-24	0.70	0.82
25-34 .....	.75	.81
45-54 .....	.66	.67

¹ Number of weeks covered 5 years within the period, or a total of 260 weeks.

income ratio for full-time, full-year (FT/FY) workers aged 20-24 increased 12 percentage points from 1967 to 1976, compared with a 1-percentage-point rise for men aged 45-54. That study also revealed greater gains, within a given age group, for men with higher occupational and educational attainment.

These findings do not imply that younger blacks were better off economically than older blacks, only that their progress in relation to that of their white counterparts was far greater during this period. Another tabulation,

Age and race	Real average hourly earnings			Percentage change, 1966-71
	1966	1969	1971	
19-29:				
Black	\$2.19	\$2.82	\$3.17	45
White	3.09	3.85	4.23	37
Black/white ratio	0.71	0.73	0.75	....
50-64:				
Black	\$2.90	\$3.11	\$3.26	12
White	4.33	4.65	4.80	11
Black/white ratio	0.67	0.67	0.68	....

derived from two separate studies,⁵ shows the changes from 1966 to 1971 both in actual hourly earnings and in the position of young black men in relation to young white men and to the group of middle-aged black workers from which the sample examined in the present study was taken. Here, expressed in dollars of constant purchasing power (1971 dollars), average hourly earnings rose by 37 percent from 1966 to 1971 for white men aged 19-29 and by 45 percent for the corresponding group of black workers. Among men aged 50-64 in 1971, average hourly earnings increased over the same period by 11 percent for white wage and salary workers and by 12 percent for blacks. This means that during

⁴ *Ibid.*, page 8.

⁵ Department of Labor, Employment and Training Administration, *Career Thresholds* (R & D Monograph No. 16), 1977, page 213; and Herbert S. Parnes et al., *The Pre-Retirement Years: Five Years in the Work Lives of Middle-Aged Men*, vol. 4, Center for Human Resource Research, The Ohio State University, December 1974, page 259. The first report examined young men as they went from 14-24 years of age in 1966 to ages 19-29 in 1971. In the second report the men were aged 45-59 in 1966 and 50-64 in 1971.

the survey period the intercolor differential was reduced more for the younger than for the older blacks, though the wage level remained higher for the latter. The ratio of black to white average hourly earnings increased from 71 percent to 75 percent for men aged 19-29, compared with almost no change for those aged 50-64. These findings are not entirely unexpected. If one is not careful, however, the general picture of black progress sometimes portrayed could be mistakenly interpreted to mean that an end to overall black-white economic differences is imminent.

There is little doubt that, in addition to the higher education and skill levels of blacks, the expanded government programs and the civil rights movements of the mid- and late 1960's have had some positive effects on the progress of these young black men. In the long run, however, any trend toward, or the eventual achievement of, black-white economic parity after retirement will depend on economic gains for blacks of all ages relative to whites during the preretirement years. Otherwise, the extent to which older black workers benefit less than young blacks in any current gains will be reflected for many years in lower aggregate benefit levels for blacks than whites when they retire or become disabled.

This article examines the differences in labor-force attachment of black and white men who were aged 45-59 in 1966. The focus of the analysis is on the extent of employment and the level of earnings over 5 years within the period 1965-71 in relation to age, education, health, and occupation. The relative labor-market position and the relative economic position of black and white workers over the survey period are measured in terms of the ratio of black to white full-time, full-year workers and the ratio of black to white annual earnings.

The data for this article were obtained from the 5-year National Longitudinal Survey (NLS) of the labor-market experience of men aged 45-59 in 1966, conducted by the Center for Human Resource Research of the Ohio State University for the Manpower Administration of the Department of Labor.⁶ The sample used here is restricted to those men who were interviewed in the 1966, 1967, 1969, and 1971 surveys, who gave a valid answer during each interview to the question on number of weeks worked, and whose current or last job was that of a wage and salary worker for a private employer or government unit. Therefore, precisely the same individuals are followed throughout the analysis. Data from the abbreviated mailed survey conducted in 1968 were omitted because of limitations for the purposes of this article. The 5 years of work-experience data referred to here is thus for calendar year 1965, obtained by the 1966 interview; the 12-month periods

⁶ *The Pre-Retirement Years* (Manpower Research Monograph No. 15), Manpower Administration, Department of Labor, 1970.

preceding the 1967 and 1969 interviews; and the 2-year period covered by the 1971 interview. In the NLS, occupational and health status data were obtained for 1966-71 and earnings data covered the period 1965-70.

This subsample consists of 2,032 white and 897 black men. They are divided into three age groups, as shown below, with the oldest category further subdivided into two age groups in most instances. The ages shown for 1966 were their ages at the time of the initial interview. The ages referred to in this article are the ages attained in 1971. Though some studies of the labor-force behavior of the elderly treat older workers as a single group, examination of the labor-force behavior of this group of men shows that the differences between those aged 60-61 and those aged 62-64 in 1971 were often substantial enough to disaggregate these two groups. Most men do become initially entitled to social security benefits and other forms of public and private retirement benefits between the ages of 62 and 64.⁷ Further details on the data source and definitions of terms are given in the technical note at the end of this article.

Age in 1966	Age in 1971
45-49.....	50-54
50-54.....	55-59
55-59.....	60-64
55-56.....	60-61
57-59.....	62-64

The period under study was one of contrasting economic and labor-market activity. During most of the survey years the national economy experienced relatively strong growth, and civilian employment rose considerably. A recession began in the latter part of 1969, and unemployment then increased. Gross national product (GNP), after correction for price changes, increased at an average annual rate of 4.1 percent from 1965 to 1969 but slowed to 1.9 percent between 1969 and 1971.⁸

Employment in the civilian labor force increased 11 percent over the survey period 1965-71.⁹ This total was made up of average annual increases of 2.3 percent during the years 1965-69 and 1.4 percent for 1969-71. During the same period the unemployment rate fell from 4.5 percent in 1965 to 3.5 percent in 1969, then rose to 4.9 percent in 1970 and to 5.9 percent in 1971. These data are cited to show the economic background against which the work experience and earned income of these men were assessed as they advanced in age. Although no direct analysis of the impact of variations in economic activity on employment and earnings is

included in this article, Professor Andrew F. Brimmer offers an excellent discussion along those lines.¹⁰

Work Experience

At least 92 percent of the black men and 95 percent of the white men in the sample worked at some time during each interview period, including the 2 years 1969-71 (table 1). The notable differences that existed and the changes that took place from 1965 to 1971 were related to full-time, full-year (FT/FY) employment. In almost every instance, sizable differences were evident between the proportions of black and white men who worked FT/FY through 1968-69. Even among the youngest group (then aged 44-48) who had a considerable number of years to work before retirement, 71 percent of the black men, compared with 83 percent of the white men, worked FT/FY in 1965. Most of the comparisons with respect to work experience that follow focus on FT/FY workers.

Over the relatively short period of 5 years a meaningful pattern in the relationship between work and age does not always emerge when such a limited age cohort is subdivided. It may be noted, however, that men aged 62-64 were less likely than younger men to be FT/FY workers. Within both racial groups, but especially among the whites, a year-by-year examination shows no differences in the proportion of FT/FY workers for men under age 60 but a rather sudden reduction in the proportion beginning at that age. The situation was not as clear among blacks. In the first two survey periods before the men had attained age 60, for instance, there were seemingly large differences in the proportion of FT/FY workers between the intermediate and oldest age groups.

Such a similarity as that observed in each year between the youngest and the intermediate age groups (those aged 50-54 and 55-59 in 1971, respectively) often might be interpreted to mean that the younger men were not likely to reduce the extent of their employment over the next 5 years. A longitudinal examination of table 1, however, reveals a gradual decrease in the proportion of FT/FY workers. Whites experienced a 6-percentage-point decrease among the youngest men during the survey period, an 11-point drop within the intermediate age group, and a 25-percentage-point decrease for men who turned age 60-64 in 1971. This trend is consistent with the known inverse relationship between work and age. Unlike their white counterparts, however, black men in the youngest and intermediate-age groups experienced no changes in the proportion of FT/FY workers from 1965 to 1971.

As might be expected, the greatest decrease in the

⁷ Julian Abbott, "Covered Employment and the Age Men Claim Retirement Benefits," *Social Security Bulletin*, April 1974, pages 3-16.

⁸ Bureau of Labor Statistics, *Handbook of Labor Statistics, 1975*, 1975, table 179, page 446.

⁹ Bureau of Labor Statistics, *Employment and Earnings*, April 1972, table A-1, page 22.

¹⁰ *The Economic Position of Black Americans: 1976*, op. cit.

Table 1.—Work experience and extent of employment, 1965-71: Percentage distribution of middle-aged men, by race and age, in 1971¹

Work experience and extent of employment	Age in 1971											
	Black						White					
	All ages	50-54	55-59	60-64	60-61	62-64	All ages	50-54	55-59	60-64	60-61	62-64
Number in sample	897	332	321	244	112	132	2,032	814	700	518	207	311
	1965											
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
Worked	95	96	98	91	91	90	98	99	98	97	99	96
Full time, full year	70	71	74	63	67	59	82	83	83	81	85	78
Full time, part year	20	20	18	20	18	23	14	14	14	14	12	16
Part time	6	5	5	7	6	8	2	2	2	1	1	1
Did not work	5	4	2	9	9	10	2	1	2	3	1	4
	1966-67											
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
Worked	95	97	97	90	93	87	98	99	98	96	97	96
Full time, full year	74	74	79	65	69	62	83	86	84	78	83	75
Full time, part year	16	18	13	17	18	17	12	11	13	15	13	16
Part time	5	5	5	7	6	8	2	2	1	3	2	4
Did not work	5	3	3	10	7	13	2	1	2	4	3	4
	1968-69											
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
Worked	93	95	95	89	93	85	96	98	96	92	93	92
Full time, full year	67	70	70	59	65	53	76	79	79	69	75	65
Full time, part year	21	19	21	23	21	23	18	17	16	21	16	24
Part time	6	5	5	7	6	8	2	2	2	3	2	3
Did not work	7	5	5	11	7	15	4	2	4	8	7	8
	1969-71											
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
Worked	92	95	95	84	90	80	95	98	96	89	93	86
Full time, full year	63	72	67	46	55	38	70	77	72	56	65	50
Full time, part year	25	21	24	32	30	34	22	19	21	29	25	32
Part time	4	2	3	6	4	8	3	2	2	4	3	5
Did not work	8	5	5	16	10	20	5	2	4	11	7	14

¹ Population is restricted to those interviewed in all four periods who gave a valid answer to the question on number of weeks worked and whose current or last job was that of a wage or salaried worker. Therefore, the same individuals

are represented in each time period. The men were between the ages of 45 and 59 when first interviewed in 1966.

proportion of FT/FY workers for both blacks and whites occurred among the oldest men. The decline became noticeable in 1968-69, then sharpened in the 1969-71 survey period, when the workers were aged 62-64. The proportion of FT/FY workers among the oldest blacks fell from 59 percent in 1965 to 38 percent in 1969-71, while the proportion among the oldest whites declined from 78 percent to 50 percent. For both races, the decline was slightly more than one-third and resulted in no relative change. Except for the oldest workers, however, differences between blacks and whites tended to narrow or disappear over the survey period, due mainly to the larger decrease among whites. The following tabulation, based on distributions in table

1, shows the ratios of black to white FT/FY workers from 1965 to 1971.

Year	Ratio of black to white full-time, full-year workers, by age in 1971				
	All ages	50-54	55-59	60-61	62-64
1965	0.85	0.86	0.89	0.79	0.77
1966-67 .....	.89	.86	.94	.83	.83
1968-69 .....	.88	.89	.89	.87	.82
1969-71 .....	.90	.94	.93	.85	.76

The longitudinal examination followed the same group of individuals and reflects differences in the

characteristics of each age group as well as the influence of external changes, including the economic changes alluded to earlier. It may thus reveal certain patterns not observable in cross-sectional analysis.

As noted earlier, the emphasis here is on differences between, and relative changes within, the two groups over a 5-year period. Comparisons between black and white men at any single point with respect to the variables used are expected to show blacks at a disadvantage.

In addition to race differences in the likelihood of working at FT/FY jobs in any year, it is also important to note that middle-aged black men were disadvantaged in terms of continuous employment (chart 1). Fifty-eight percent of the black men, compared with 70 percent of the white men, worked an average of 50 or more weeks a year over the survey period.¹¹ The differences varied by age and were greatest among the men in their sixties.

Over the survey period, there was a considerable amount of change in the extent of employment by the men who worked FT/FY in 1965 that is not evident from the net changes shown above. Although virtually all these men reported that they worked some time during the last two periods, a sizable proportion of individuals of both races had reduced the extent of their work (table 2). About two-thirds of the men (63 percent of the blacks and 66 percent of the whites) were employed FT/FY in all three periods. The tabulation below shows how these proportions differed by age.

Age in 1971	Percent of men who worked full-time, full-year in all periods, 1965, 1968-69, and 1969-71	
	Black	White
50-54	67	71
55-59	67	69
60-61	57	62
62-64	45	50

About one-fifth of both the blacks and whites who had worked FT/FY in the first survey year were no longer FT/FY workers by 1968-69. An additional 14-15 percent worked less than FT/FY in the final period but others returned to FT/FY status, thus leaving the proportion of FT/FY workers in 1969-71 at about three-fourths.

To summarize, in any given year from 1965 to 1971 only a very small proportion of middle-aged men did not work at all, and the differences between blacks and whites were not significant. White men, however, were

¹¹ This population was not restricted to full-time workers. Examination of the entire sample, however, showed that an average of 98 percent of the white men and 96 percent of the black men who worked at least 50 weeks in each year also worked at least 35 hours per week.

Table 2.—Work experience and extent of employment, 1968-69 and 1969-71, for full-time, full-year workers in 1965: Percentage distribution of middle-aged men, by race

Work experience and extent of employment, 1969-71	Work experience and extent of employment, 1968-69				
	Total	Worked			Did not work
		All workers	Full time, full year	Less than full time, full year	
	Black				
Number in sample ¹	625	....	....	....	....
Total percent ²	100	98	77	20	2
Worked	97	96	77	19	1
Full time, full year	74	74	63	11	0
Less than full time, full year	23	23	14	8	1
Did not work	3	1	0	1	2
	White				
Number in sample ¹	1,676	....	....	....	....
Total percent ²	100	98	82	16	2
Worked	97	97	82	15	(3)
Full time, full year	76	76	66	9	(3)
Less than full time, full year	21	21	15	6	(3)
Did not work	3	1	0	1	2

¹ Full-time, full-year workers in 1965.

² Distributions expressed as percentage of total number.

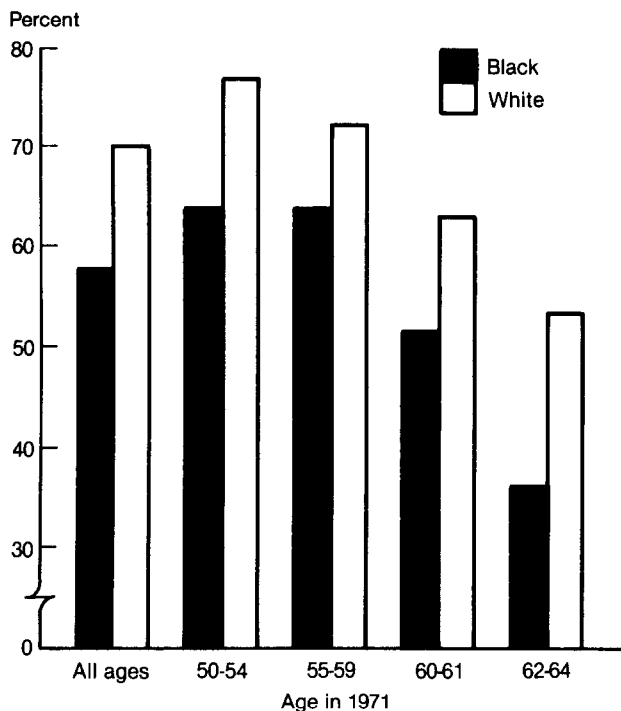
³ Less than 0.5 percent.

more likely than black men to work full time, full year; the relative improvement in FT/FY work noted for blacks over the survey period was modest and resulted from a greater decline of FT/FY workers among whites than blacks. For those who held FT/FY jobs in 1965, labor-market behavior in terms of work reduction was very similar for both races. The sections that follow relate selected characteristics to differences between blacks and whites in the extent of employment and level of earnings.

Education

To the extent that educational attainment affects labor-force attachment, the lower schooling of middle-aged black men relative to that of their white counterparts is an important factor in explaining the differences in their work histories. Sixty-seven percent of the black men had not gone beyond elementary school, compared with 35 percent of the white men (table 3). Educational level varied considerably by age, with the older men being less educated than the younger men. Even among the youngest group, however, 45 percent of the blacks, compared with 13 percent of the whites, had

Chart 1.—Percent of middle-aged men who worked 250 weeks or more¹ during 1965-71, by age and race



¹ Out of a possible total of 260 weeks during a 5-year period.

Table 3.—Years of schooling completed: Percentage distribution of middle-aged men, by age and race 1971

Years of schooling completed	Age in 1971			
	All ages	50-54	55-59	60-64
	Black			
Number in sample	897	332	321	244
Total percent	100	100	100	100
Less than 8	55	45	59	63
8	12	12	12	13
High school:				
1-3	17	20	15	14
4	11	17	9	5
College:				
1-3	2	3	2	2
4 or more	3	3	3	2
	White			
Number in sample	2,032	814	700	518
Total percent	100	100	100	100
Less than 8	17	13	16	23
8	18	15	19	21
High school:				
1-3	21	21	23	20
4	26	31	26	16
College:				
1-3	9	9	7	11
4 or more	10	11	9	9

completed less than 8 years of schooling. Though this racial disadvantage obtained as well at the high school level, the smaller relative disadvantage of blacks among the younger men is noteworthy. Among the men aged 50-54, about twice as many whites as blacks had completed at least their secondary education; among those aged 60-64, four times as many whites as blacks had received at least a high school education.

A positive relationship usually exists between years of schooling and labor-force participation, but the finding here that practically no differences were evident in the proportion of men at all educational levels who had done some work in 1965 is not surprising, since the measure used referred to having worked at any time during the year (table 4). Men at this age level are expected to work whatever their level of education. The table, however, does show a positive relationship between years of schooling and FT/FY employment. As the level of education rose, so too did the likelihood of working full time for the entire year.

Though the positive relationship between education and FT/FY work holds for men of both races, blacks were less likely than whites across most ranges of the schooling spectrum to hold FT/FY jobs (chart 2). Black-white differences were greatest at the lowest levels of educational attainment, which contained a disproportionate number of black men. This factor accounts for the large difference in FT/FY workers between the races when education is not held constant. It also indicates that perhaps poorly educated blacks have a much more difficult time competing with poorly educated whites in obtaining jobs that provide FT/FY work than do more educated blacks with their white counterparts. More interesting, however, is the shape of the relationship over all educational levels. Black men showed a stronger rise in FT/FY employment as education rose, especially from 8 years to 12 years of schooling. A leveling off for both groups after 12 years of schooling was apparent and racial differences in the proportion of FT/FY workers between these middle-aged men were not statistically significant at this point. By 1971, a larger decrease was evident in the proportion of FT/FY workers among white men, starting at the high school level, which resulted in near parity between the races. One explanation for the larger reduction among white FT/FY workers by 1971 might be that those with higher educational attainment had the kind of employment history that allowed them, to a greater extent than blacks, to reduce or end their labor-force participation as they advanced in age.

The contrasting patterns observed from 1965 to 1971 do not indicate that, over the long term, blacks at any educational level were as likely as whites to hold FT/FY jobs consistently. Chart 3 shows that over the survey period the relationship between years of schooling completed and working an average of 50 or more

Table 4.—Work experience and extent of employment, 1965: Percentage distribution of middle-aged men, by years of schooling completed and race

Work experience and extent of employment, 1965	Years of schooling completed			
	Elementary 0-8	High school		College, 1 or more
		1-3	4	
Black				
Number in sample	604	149	98	46
Total percent	100	100	100	100
Worked	93	99	98	100
Full time, full year	64	76	86	85
Less than full time, full year ..	29	23	12	15
Did not work	7	1	2	0
White				
Number in sample	703	433	519	377
Total percent	100	100	100	100
Worked	96	98	99	100
Full time, full year	74	81	89	90
Less than full time, full year ..	22	17	10	10
Did not work	4	2	1	0

weeks a year was similar for black and white men and that any existing differences tended to become smaller as education rose.¹²

Some of the positive association between schooling and the holding of FT/FY jobs may be due to a higher incidence of work-limiting health conditions among men with little education. Some of this interrelationship is noted in the next section.

Health

It is generally accepted that health affects labor-force activity. Among older workers (through age 64), poor health is a prevalent reason given for reduced labor-force participation or for complete withdrawal from the labor force.¹³ It has also been found that among the elderly, greater proportions of black than of white men report having physical limitations on their ability to work.¹⁴ In this article data over a 5-year period on the health status, and changes therein, of the same men were examined to determine the effects of poor health on the extent of their work activity.

Little difference was found between the races in the relationship of self-assessed health status to work activi-

¹² See footnote 11.

¹³ Gayle B. Thompson, *op. cit.*

¹⁴ Leonard Rubin, "Economic Status of Black Newly Entitled Workers," in *Reaching Retirement Age: Findings From a Survey of Newly Entitled Workers, 1968-70* (Research Report No. 47), Office of Research and Statistics, Social Security Administration, 1976.

Table 5.—Effect health condition had on work, 1966 and 1971: Percentage distribution of middle-aged men, by age in 1971, and race

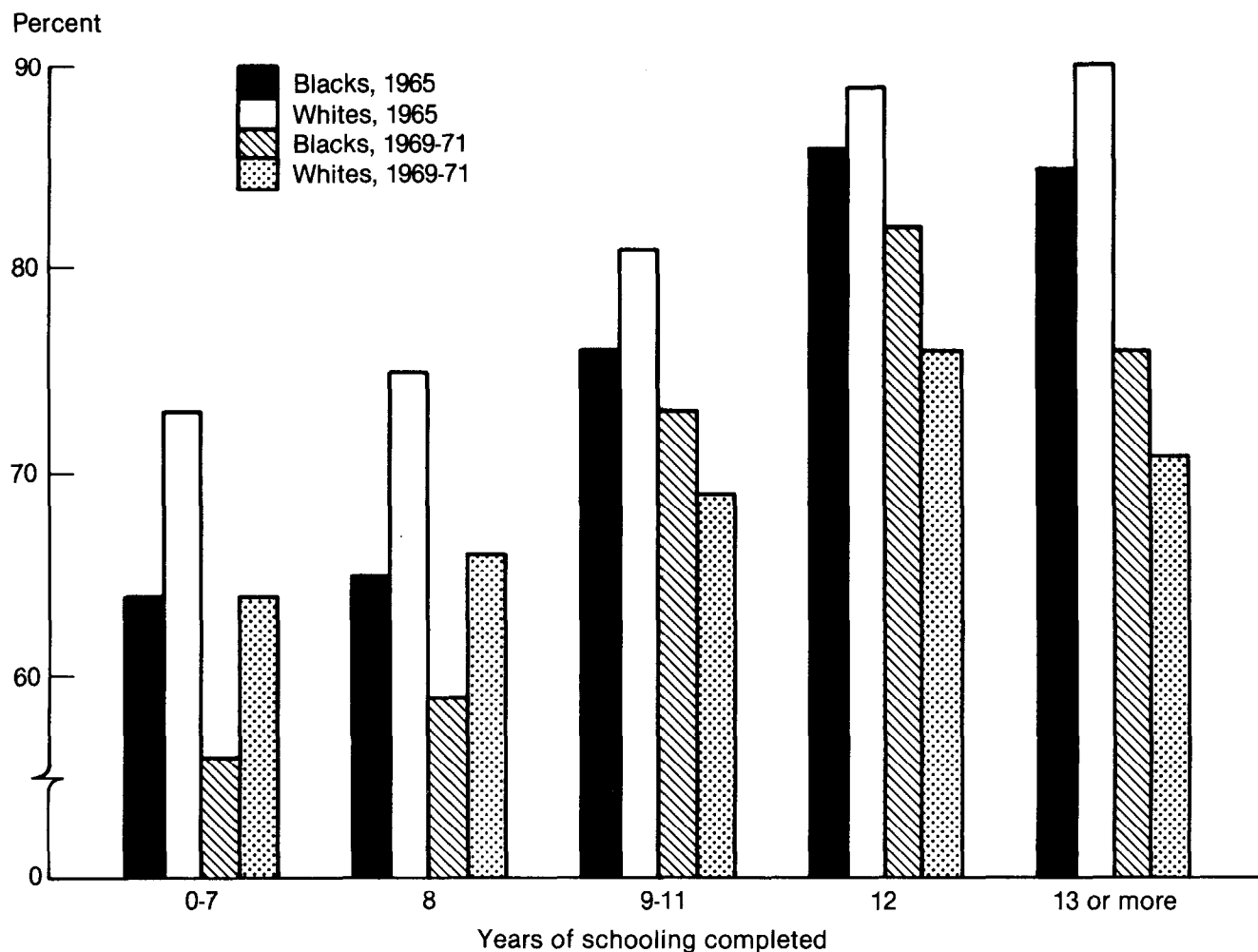
Health condition 1966 and 1971	Age in 1971				
	All ages	50-54	55-59	60-61	62-64
Black					
Number in sample	897	332	321	112	132
Total percent	100	100	100	100	100
Health affected work:					
Both years	13	8	11	21	22
1966, not 1971	7	6	9	8	6
1971, not 1966	13	9	13	16	20
Neither year	67	76	67	54	52
White					
Number in sample	2,032	814	700	207	311
Total percent	100	100	100	100	100
Health affected work:					
Both years	13	10	12	16	20
1966, not 1971	8	8	9	7	8
1971, not 1966	12	10	12	16	15
Neither year	66	71	67	60	57

ty. About 1 in 8 men reported having had a health condition that affected their ability to work in both 1966 and 1971, but about 2 out of 3 respondents indicated they were free of such health limitations in both years (table 5). Of those who reported a change in health condition (one-fifth of both blacks and whites), about 65 percent of the black and 60 percent of the white men had changed for the worse by 1971. The race difference was not significant, however.

A direct relationship was evident between health-related work limitations and age for both white and black men—more pronounced among the latter. The frequency with which health affected work in 1966 and/or 1971 was twice as high for blacks in their early sixties as for those aged 50-54. Among white men the frequency of limitations was one and a half times greater for the older men than for the younger men. Data for 1966 and 1969, presented in the tabulation below, also indicate that middle-aged black men suf-

Race and year	Percent of men whose health prevented work, by age in 1971			
	Total	50-54	55-59	60-64
Black:				
1966	3	2	2	6
1969	7	5	5	13
White:				
1966	1	1	1	3
1969	4	2	2	8

Chart 2.—Percent of full-time, full-year workers, 1965 and 1969-71, by years of schooling completed and race



ferred a higher incidence of severe disability than did whites.¹⁵ This finding is supported by census data showing that black men aged 50-64 were about twice as likely as their white counterparts to report having disabilities that completely prevented them from working.¹⁶

The expected positive association between health and education was present for both black and white middle-aged men, and there is some indication that the proportion of blacks with work limitations was lower than that of whites when years of completed schooling were held constant (table 6). This observation is also confirmed by census data showing that when education is held constant and men with long-term and complete work

¹⁵ The health question in 1971 was different from the one used in 1966 (the first interview wave of the survey) and 1969. In the 2 earlier years, one of the three questions was, "Does your health or physical condition keep you from working?" In 1971, the single question was, "Do you have any health problem or condition that limits the amount or kind of work you can do?" Therefore, only 1966 and 1969 data could be used in this tabulation.

¹⁶ Bureau of the Census, 1970 Census of Population, *Subject Reports: Persons With Work Disability* (Final Report PC 2-6C), January 1973, table 1.

disabilities are excluded, the proportion of black men aged 45-64 with work limitations was equal to or lower than that of their white counterparts in most instances.¹⁷ Exclusion of the long-term, completely disabled men from the census data essentially restricts the remaining population to men likely to have been in the labor force at least some time during the period studied in this article. It is difficult to suggest an explanation for this observation, since work limitations are also related to type of occupation, and blacks at all educational levels were more likely than whites to be in those occupations in which health problems more readily impair their ability to do the work.

In a comprehensive study of labor-force participation, Bowen and Finegan concluded that "There is a powerful interaction among health, schooling, and labor force participation."¹⁸ Higher levels of education and lower incidences of disabling conditions are associated with a greater likelihood of FT/FY work (table 7). As

¹⁷ *Ibid.*

¹⁸ William Bowen and T. Alden Finegan, *The Economics of Labor Force Participation*, Princeton University Press, 1969, page 64.

Table 6.—Effect health condition had on work, 1966 and 1971: Percentage distribution of middle-aged men, by years of schooling completed and race

Health condition 1966 and 1971	Years of schooling completed		
	0-8	9-11	12 or more
Black			
Number in sample.....	601	147	143
Total percent	100	100	100
Health affected work:			
Both years.....	16	8	4
1966, not 1971.....	7	10	6
1971, not 1966.....	14	11	11
Neither year.....	63	71	78
White			
Number in sample.....	699	429	891
Total percent	100	100	100
Health affected work:			
Both years.....	18	13	9
1966, not 1971.....	9	8	8
1971, not 1966.....	14	12	11
Neither year.....	60	67	71

might be as expected, the proportion of FT/FY workers among healthy men is higher than that for those who reported having a health problem affecting their work. These differences became larger as the men aged because of the sharp decrease in the proportion of FT/FY workers for the unhealthy men. A look at the per-

Table 7.—Percent of middle-aged men who worked full time, full year, by health status, years of schooling completed, and race, selected years, 1965-71

Year	Healthy				Unhealthy			
	Total	Years of schooling			Total	Years of schooling		
		0-8	9-11	12 or more		0-8	9-11	12 or more
Black								
1965.....	75	72	76	86	47	39	73	(1)
1968-69.....	75	73	78	80	42	37	62	(1)
1969-71.....	75	71	79	84	30	23	46	(1)
White								
1965.....	86	80	86	91	68	59	63	82
1968-69.....	83	78	87	86	54	50	46	64
1969-71.....	78	77	77	79	47	41	44	55
Black/white ratio								
1965.....	0.87	0.90	0.88	0.94	0.69	0.66	1.16	.....
1968-69.....	.90	.94	.90	.93	.78	.74	1.35	.....
1969-71.....	.96	.92	1.03	1.06	.64	.56	1.04	.....

¹ Percentages not shown; base fewer than 25 cases.

centage of FT/FY workers in both groups of men shows that the association between educational attainment and FT/FY work was much stronger for men with some work limitations than for those with no work limitations.

Few differences were evident between healthy blacks and whites in the proportion of FT/FY workers based on the level of education completed. Further, what differences existed became smaller or disappeared over the years, but not because of any increase in the proportion of healthy blacks working at full-time jobs all year. Rather, the proportion of healthy white workers engaged in FT/FY work decreased, falling from 86 percent in 1965 to 78 percent in 1971. Moreover, the reduction was greater as education rose. In comparison, the proportion of FT/FY workers remained at 75 percent over the survey period for healthy black workers. This relationship was present for all educational levels.

Blacks with health problems who had not gone beyond the eighth grade were particularly disadvantaged compared with both unhealthy whites and healthy blacks who had the same amount of schooling. The fact that whites with health problems and little schooling were so much more likely than blacks with similar characteristics to have FT/FY employment may well also involve discrimination in the labor market.

The greater disparity in work activity between black and white unhealthy men than between black and white healthy men may be another indication of the greater effect of health on the ability to work of black men, given the impact of their lower educational achievement and, perhaps, their relegation to less favorable occupations. Occupational differences between blacks and whites and the inverse relationship between physically demanding work and years of schooling are discussed in the next section.

Occupation

The occupational disadvantage of black workers is reflected by the data in chart 4. In 1971, middle-aged black workers were much less likely than their white counterparts to be in white-collar occupations and were substantially over-represented in lower-status laborer, service, and farm jobs. Only slight variations in the occupational distributions of both groups occurred between 1966 and 1971 despite considerable inter-occupational shifting by individuals during the period (table 8). More overall movement took place among blacks than whites, and a slightly larger proportion of blacks shifted upwards (19 percent, compared with 14 percent). This rather nebulous gain, however, resulted mainly from the shift of black farm workers into unskilled blue-collar jobs.

Some evidence of age-related differences was appar-

ent among blacks: Men aged 60 and older were about 40 percent more likely than those aged 50-54 to have lower-status jobs but were only half as likely to be in crafts and white-collar jobs (table 9). No real differences were found among the white men according to age. White men aged 50-54 were twice as likely as blacks in the same age group to hold the higher-status jobs, and those aged 60-64 were four times as likely to do so as older blacks.

Although a positive relationship existed between education and occupation for both black and white men, the disproportionality in occupational distribution was substantial across all educational levels and more pronounced at the highest level with respect to lower-status jobs (chart 5). Among the men with 4 years of high school or higher education, blacks were about three and a half times more likely than whites to be in such lower-paying jobs as nonfarm laborer, service worker, or farm worker in 1971.¹⁹ The proportion of higher educated blacks in these jobs was about the same as that for whites who had not gone beyond elementary school. In the higher educational category, blacks were only about half as likely as whites to be in the higher-status (higher-paid) occupations. These kinds of differences are sometimes considered as prima facie evidence of occupational discrimination.

Because continuity of employment is related to type of occupation, differences in the proportion of FT/FY workers were more frequent, and generally larger, within the respective racial group than between black and white men in similar occupational groups (table 10). Nonfarm laborers and farm workers were least likely to be FT/FY workers among blacks and whites alike. In 1965, however, almost two-thirds of the white farm workers were employed full time, full year, compared with less than half the black farm workers.

The proportion of FT/FY workers was generally lower in 1971 than in 1965, except for black men in professional, technical, and managerial occupations. Since, as previously noted, the decrease was often greater for whites than for blacks, what differences there were in the proportion of FT/FY workers narrowed or disappeared during the survey period for practically every occupational group.

Earnings

Sizable differences were evident in the earnings (in current dollars) of middle-aged black and white men in the sample from 1965 to 1970. In 1965 about 30 percent of the black men with earnings received less

¹⁹ Where they occurred, the differences in occupational distribution between 1966 and 1971 based on years of schooling completed were not substantial and showed no consistent pattern. The distribution shown for 1971 is therefore appropriate for any year during the survey.

Table 8.—Occupation in 1971 by occupation in 1966: Percentage distribution of middle-aged men, by race

[Figures in bold represent employment in same occupational group for 1966 and 1971]

Occupation, 1966	Occupation, 1971									
	Total		Professional/technical	Managerial	Clerical/sales	Craftsmen	Operatives	Nonfarm laborers	Service workers	Farm workers
	Number	Percent								
Black										
Professional/technical.....	127	100	85	0	4	4	4	0	4	0
Managerial.....	10	(2)								
Clerical/sales.....	149	100	2	8	63	4	10	10	2	0
Craftsmen.....	112	100	2	1	3	65	10	11	8	1
Operatives.....	246	100	1	(3)	2	12	70	11	4	(3)
Nonfarm laborers.....	194	100	1	2	3	8	17	54	13	3
Service workers.....	115	100	1	1	8	2	5	8	74	2
Farm workers.....	58	100	0	0	0	3	3	19	9	66
White										
Professional/technical.....	215	100	77	10	6	4	2	(3)	(3)	0
Managerial.....	255	100	7	73	10	7	1	1	2	0
Clerical/sales.....	227	100	7	14	66	5	6	1	1	0
Craftsmen.....	530	100	2	5	2	80	8	2	2	0
Operatives.....	410	100	1	2	3	14	70	5	4	(3)
Nonfarm laborers.....	104	100	3	1	3	12	22	52	8	0
Service workers.....	115	100	3	3	1	7	8	5	72	0
Farm workers.....	144	100	0	0	0	0	11	5	2	82

¹ Based on fewer than 50 cases.

² Percentages not shown; base fewer than 25 cases.

³ Less than 0.5 percent.

than \$3,000, compared with 8 percent of the white men (table 11). By 1970 the proportion of men with no earnings had doubled for both races. During the same period, however, there was a sharp decrease in the proportion of black men with annual earnings of less than \$3,000. This decrease in the proportion under

Table 9.—Occupation in 1966: Percentage distribution of middle-aged men, by age in 1971 and race

Occupation	Age in 1971					
	Black			White		
	50-54	55-59	60-64	50-54	55-59	60-64
Number in sample.....	332	321	244	814	700	518
Total percent.....	100	100	100	100	100	100
White collar:						
Professional/technical.....	4	3	2	13	10	10
Managerial.....	2	(1)	1	10	15	15
Clerical/sales.....	9	5	4	14	10	12
Blue collar:						
Craftsmen.....	16	13	9	30	25	28
Operatives.....	31	31	30	22	23	19
Nonfarm laborers.....	22	24	26	5	7	5
Service workers.....	11	17	16	5	6	7
Farm workers.....	5	7	11	1	3	4

¹ Less than 0.5 percent.

Table 10.—Percent of middle-aged men who worked full time, full year, by occupation and race, selected years

Occupation	1965	1968-69	1969-71
Professional/technical/managerial.....	177	177	88
Clerical/sales.....	93	83	74
Craftsmen.....	73	72	67
Operatives.....	73	67	63
Nonfarm laborers.....	58	53	49
Service workers.....	78	79	70
Farm workers.....	47	159	49
	White		
Professional/technical/managerial.....	92	85	78
Clerical/sales.....	87	82	72
Craftsmen.....	81	75	71
Operatives.....	78	68	67
Nonfarm laborers.....	67	62	51
Service workers.....	81	77	62
Farm workers.....	64	162	148

¹ Based on fewer than 50 cases.

Table 11.—Total earnings in 1970 by total earnings in 1965: Percentage distribution of middle-aged men, by race

[Earnings in current dollars. Figures in bold represent same earnings category for 1965 and 1970]

Total earnings, 1970	Total earnings, 1965							
	Total	None	\$1-2,999	\$3,000-4,999	\$5,000-6,999	\$7,000-9,999	\$10,000-14,999	\$15,000 or more
	Black							
Number: In sample..	897	....	....	....	....	....	....	....
Reporting..	863	....	....	....	....	....	....	....
Total percent ¹	100	5	30	24	25	14	2	(2)
None.....	10	4	2	1	2	1	0	0
\$1-2,999.....	13	1	10	1	1	(2)	0	0
3,000-4,999.....	21	(2)	12	7	1	1	0	0
5,000-6,999.....	19	(2)	4	8	6	1	(2)	0
7,000-9,999.....	26	(2)	1	5	13	6	(2)	0
10,000-14,999.....	10	0	(2)	1	3	5	1	0
15,000 or more..	1	0	0	0	0	(2)	(2)	(2)
	White							
Number: In sample..	2,032	....	....	....	....	....	....	....
Reporting..	1,941	....	....	....	....	....	....	....
Total percent	100	3	8	13	25	32	14	6
None.....	7	2	1	1	1	1	1	(2)
\$1-2,999.....	5	(2)	2	1	1	1	(2)	(2)
3,000-4,999.....	7	(2)	3	2	1	(2)	(2)	0
5,000-6,999.....	13	0	1	5	5	1	(2)	(2)
7,000-9,999.....	29	(2)	1	3	14	10	1	(2)
10,000-14,999.....	26	(2)	(2)	(2)	3	16	6	(2)
15,000 or more..	13	(2)	0	(2)	(2)	2	6	5

¹ All percentages based on number reporting.

² Less than 0.5 percent.

\$3,000 resulted not because black workers with low earnings in 1965 left the workforce, but rather because over the survey period the earnings of about 60 percent of them had risen. This rise in wages and salaries also resulted in a five-fold increase in the proportion of black men who earned \$10,000 or more, but the proportion of white men in that category only doubled. Even so, only 11 percent of the black men had earnings of \$10,000 or more in 1970, compared with 39 percent of the whites. The increases in the Federal minimum wage from 1965 to 1970 undoubtedly helped raise the level of annual earnings for men at the bottom of the wage scale. In addition, for many workers, especially those whose wages were adjusted under cost-of-living agreements, some of the increase merely reflected the cumulative effects of continued inflation. From 1965 to 1970, the consumer price index registered an increase of 22 percent. However, since the focus here is on the relative earnings position of blacks to whites rather than on measuring the real money gains of either group, no adjustment is made in the reported earnings. The earnings disparity between blacks and whites is shown in the following tabulation.

Race	Median earnings and black/white earnings for all workers			
	1965	1966	1968	1970
Black.....	\$4,358	\$4,770	\$5,448	\$6,190
White.....	7,229	7,536	8,317	9,145
Black/white median earnings ratio.....	0.60	0.63	0.66	0.68

The 42-percent increase in median earnings of the black men from 1965 to 1970 was considerably more than that of the white men (26 percent). Because the levels were so disparate initially, however, the median earnings of these black men improved only slightly during the period relative to those of white men.

To note properly any trends in earnings levels over the period, work experience must be associated with the earnings data. The NLS survey, however, contained only one interview in which earnings and employment information were obtained for the same time period—calendar year 1965. In other interviews, earnings data were on a calendar-year basis and employment data were obtained for the survey year. It was nevertheless possible to associate both these data for 1970.²⁰ Therefore, only the annual earnings data for 1965 and 1970 are used to describe the overall changes in earnings. In addition, to eliminate the effect of different levels and types of employment in the analysis, most of the comparisons are restricted to full-time, full-year

²⁰ For an explanation of the method used, see the technical note to this article.

workers and relate to age and to educational and occupational status.

Among FT/FY workers in 1965, the median earnings of white men were 56 percent higher than those of black men; in 1970, they were 42 percent higher (table 12). Only very few, and small, differences in earnings by age within either racial group were evident. The median earnings of the men in all age groups usually increased as they went from ages 45-59 in 1966 to ages 50-64 in 1971, and there was practically no difference by age in the black-to-white median earnings ratio.

The large differences in the earnings of black and white middle-aged men is clearly shown by the fact that the 1965 median earnings of white men were higher than the 1970 median earnings of black men. In other words, if there had been no increase in white earnings from 1965 to 1970, it would have taken these black men much more than 5 years to catch up.

Annual Earnings and Subsequent Labor-Market Activity

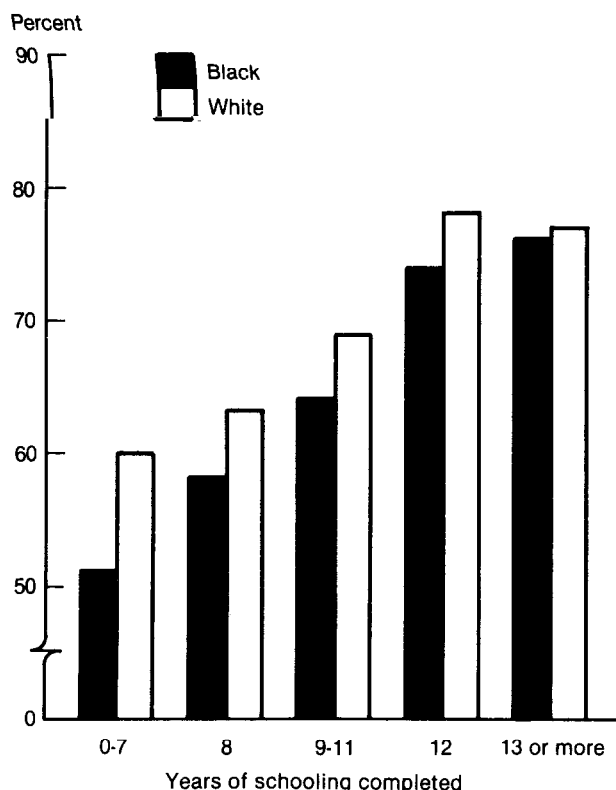
The labor-market activity of these middle-aged men in 1971 was positively related to both their level of earnings in 1965 and their economic progress 5 years

Table 12.—Median earnings, 1965-70, of middle-aged men who worked full time, full year; percentage change in amount of earnings; and black/white median earnings ratio, by age in 1971 and race

[Earnings in current dollars]

Year	Age in 1971					
	All ages	50-54	55-59	60-64	60-61	62-64
Black						
1965	\$4,837	\$5,171	\$4,444	\$4,789	\$4,681	\$4,937
1966	5,216	5,536	5,041	5,000	4,681	5,269
1968	5,676	6,220	5,362	5,416	5,650	5,125
1970	6,742	7,145	6,589	6,441	6,437	6,444
Percentage change, 1965-70 earnings	39	38	48	34	38	30
White						
1965	\$7,554	\$7,890	\$7,349	\$7,317	\$7,152	\$7,448
1966	7,745	8,116	7,590	7,288	7,214	7,375
1968	8,531	9,035	8,258	8,066	8,260	7,860
1970	9,602	10,057	9,543	8,629	8,617	8,642
Percentage change, 1965-70 earnings	27	27	30	18	20	16
Black/white median earnings ratio						
1965	0.64	0.66	0.60	0.65	0.65	0.66
1966 .....	.67	.68	.66	.69	.65	.71
1968 .....	.66	.69	.65	.67	.68	.65
1970 .....	.70	.71	.69	.75	.75	.74

Chart 3.—Percent of middle-aged men who worked 250 weeks or more¹ during 1965-71, by years of schooling completed and race



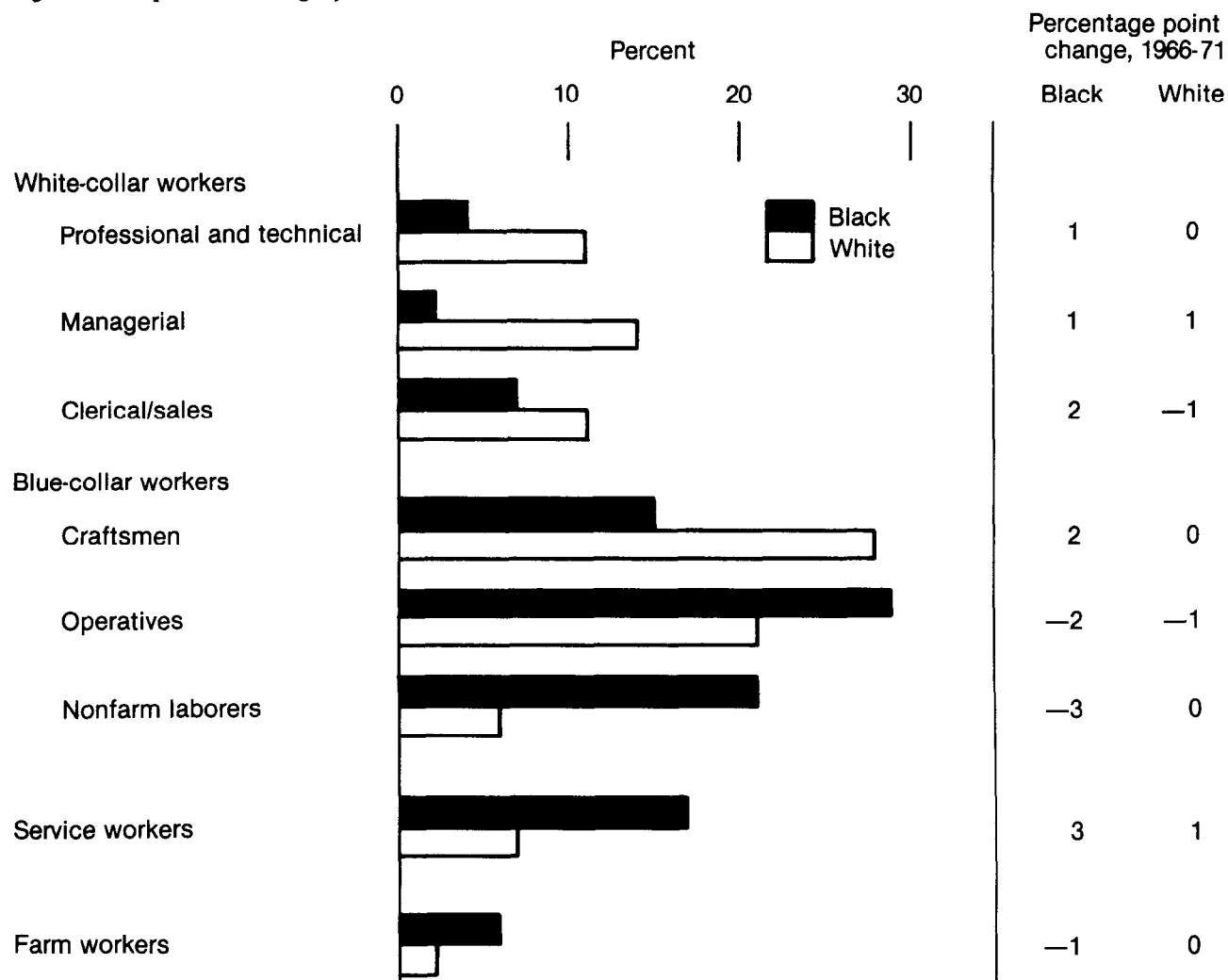
¹ Out of a possible total of 260 weeks during a 5-year period.

later—especially among the low earners (table 13). For example, among black workers who earned less than \$3,000 in 1965, one-third earned the same amount or less in 1970. Of those earning less than \$3,000 in both years, 65 percent were out of the labor force in 1971, including 50 percent who reported that they were unable to work. Those whose 1970 earnings were higher than in 1965, however, were about three times more likely to be employed in 1971, and only 1 percent was unable to work. These patterns of employment relative to earnings also obtained for higher wage and salary earners and were similar for men of both races. In other words, the data show that older men were likely to remain in the labor force, whatever the level of their earnings, if some economic progress had been realized over time. Those whose earnings were the same or lower 5 years later were more likely to drop out; the lower the income the greater the likelihood.

Education

The commonly observed direct relationship between years of schooling and level of annual earnings was evident in both the 1965 and 1970 data, but the differences among the various educational levels and

Chart 4.—Occupation in 1971 and percentage distribution of middle-aged men, by race and percentage point change in occupational category from 1966 to 1971



the pattern of change from 1965 to 1970 were different for black and white men (table 14). The differences show that the effect of education on annual earnings was stronger for whites than for blacks as education rose. Among black men in 1970, for example, the median earnings of FT/FY workers with 8 years of schooling was about 21 percent higher than that of men who had completed 7 years or less. Blacks who had attended college had median earnings that were 16 percent higher than those of high school graduates. White men who had completed 8 years of schooling and who worked FT/FY had median earnings that were 17 percent higher than those of other whites with 1-7 years of education, but the median earnings of those who had at least some college training were greater than those of high school graduates by 40 percent. The percentage difference in median earnings between high school graduates and those with 8 years of schooling who worked FT/FY was similar for blacks and whites. Earnings differences between blacks and whites in

relation to years of schooling remained large over the 5-year period; the greatest difference, as measured by the black-white earnings ratio, was among those who had graduated from college. The small cell sizes of blacks at the various educational levels here would indeed provide only rough estimates, but similar patterns of earnings differences by education up through 4 years of college are confirmed by census data.²¹

Among men with less than 8 years of schooling, blacks gained most in relation to whites with the result that the black-to-white average earnings ratio for this group rose from 0.66 to 0.78. These findings are in contrast to those in studies including younger men, which show larger gains for blacks and higher ratios since the mid-1960's, especially among the well-educated men.²²

²¹ See Bureau of the Census, *1970 Census of Population, Subject Reports: Earnings by Occupation and Education (PC 2-8B)*, tables 1 and 2.

²² Richard B. Freeman, *op. cit.*, page 6.

Table 13.—Labor-force activity in survey week, 1971: Percentage distribution of middle-aged men by total earnings in 1965, by comparison of 1965 earnings with those in 1970 and by race

[Earnings in current dollars]									
Labor force activity in survey week, 1971	Less than \$3,000 in 1965			\$3,000-6,999 in 1965			\$7,000 or more in 1965		
	Total	Low-er/ same in 1970	High-er in 1970	Total	Low-er/ same in 1970	High-er in 1970	Total	Low-er/ same in 1970	High-er in 1970
Black									
Number in sample.....	319	103	216	432	93	339	137	148	89
Percent:									
Distribution.....	100	32	68	100	22	78	100	35	65
Total.....	100	100	100	100	100	100	100	100	100
In labor force:									
Employed.....	70	30	89	86	56	94	91	83	96
Unemployed.....	3	5	3	4	6	3	1	4	0
Out of labor force:									
Retired.....	4	4	4	5	18	1	5	6	4
Unable to work.....	17	50	1	4	15	1	1	4	0
Other.....	5	11	3	2	4	1	1	2	0
White									
Number in sample.....	215	82	133	756	144	612	1,023	263	760
Percent:									
Distribution.....	100	38	62	100	19	81	100	26	74
Total.....	100	100	100	100	100	100	100	100	100
In labor force:									
Employed.....	67	38	86	89	55	97	91	74	96
Unemployed.....	4	2	5	2	4	1	1	2	1
Out of labor force:									
Retired.....	4	7	2	4	15	2	5	15	2
Unable to work.....	19	43	4	4	19	(2)	2	7	1
Other.....	6	10	4	2	8	(2)	1	2	1

¹ Based on fewer than 50 cases.

² Less than 0.5 percent.

Occupation

Except among operatives and nonfarm laborers, the changes in median earnings from 1965 to 1970 with respect to occupation were very similar for black and white men (table 15). The earnings of black men in these jobs in 1970 were 41 percent higher than the earnings of men in the same occupations in 1965. This compares with a 22-percent increase for white operatives and a 29-percent increase for white nonfarm laborers over the same period. As a result, only in these two occupational categories was there a noticeable gain by black middle-aged men relative to white men over the survey period. By contrast, among upper-level white-collar workers, black men earned only two-thirds as much as white men.

A further examination of earnings differences, which is not shown here, was made for FT/FY workers in selected occupational groups while education was held constant. The men were divided into two educational

Table 14.—Median earnings, percentage change in median earnings, and black/white median earnings ratio, 1965 and 1970, of full-time, full-year workers, by years of schooling completed and race

Race and year	Years of schooling completed				
	1-7	8	9-11	12	13 or more
Median earnings					
Black:					
1965.....	\$3,760	\$5,281	\$5,650	\$6,318	\$6,571
1970.....	5,600	6,777	7,656	8,045	19,375
White:					
1965.....	5,703	6,622	7,264	7,986	10,689
1970.....	7,166	8,381	9,195	10,480	14,727
Percentage change in median earnings, 1965-70					
Black.....	49	28	36	27	43
White.....	26	26	26	31	38
Black/white median earnings ratio					
1965.....	0.66	0.80	0.78	0.79	0.60
1970.....	.78	.81	.83	.77	.64

¹ Based on fewer than 50 cases.

groups—those who had completed less than 12 years of schooling and those who had completed 12 years or more. Virtually no differences were found in the median earnings ratios from those shown in table 15, indicating that these black men had lower earnings than their white counterparts even though they had received similar education, held similar jobs, and worked as much.²³

Social Security Benefit Levels

Since the amount of covered earnings used to compute social security benefits is limited by a statutory ceiling, one measure that might provide some insight into the potential differences in future benefit levels between blacks and whites is to see how many of the surveyed men had the maximum creditable, or taxable, earnings.²⁴ The maximum taxable annual wages were \$4,800 in 1965 and \$7,800 in 1970. In the first year, 42 percent of all black men and 78 percent of all white men in the sample earned the maximum; in 1970 the

²³ This conclusion is supported by census data with a more detailed breakdown of years of school completed than that contained in the data for this report. See 1970 Census of Population, **Subject Reports: Earnings by Occupation and Education**, op. cit.

²⁴ For a schedule of these earnings, see **Social Security Handbook**, sixth edition, Social Security Administration, July 1978, page 228. Note: Since 1979, benefits have been based on average indexed monthly earnings. The worker's earnings are indexed to the period immediately before the year in which he or she reaches age 62, becomes disabled, or dies and reflect the increases in average wages that have occurred since the earnings were received. Before 1979, the benefit amount was based on the average monthly earnings—that is, the actual covered earnings reported by employers.

gap was slightly larger—only 27 percent of the blacks, compared with 60 percent of the whites received maximum earnings (chart 6). There were differences by age within both racial groups, but black men generally were only about half as likely as white men to earn the maximum taxable wages. In both 1965 and 1970 the average monthly social security retired-worker benefit for black men was about four-fifths that of white men. The benefit amount for black men who were awarded benefits during 1965 was \$76.77 a month, compared with \$99.90 for all workers. It was \$113.84 for black men in 1970 and \$139.17 for white men awarded benefits during that year.²⁵

The annual creditable maximum, or benefit base, has increased substantially since 1965, with the concomitant decrease, larger for blacks than for whites, in the proportion of workers with maximum taxable earnings. In 1975, when the base was \$14,100, 12 percent of all black men aged 50-64 in covered employment and 39 percent of the similarly situated white men had covered earnings at or above the taxable maximum.²⁶ As maximum taxable earnings increased from 1965 to 1975, therefore, the proportion of blacks receiving the highest amount of creditable earnings fell by 70 percent while the proportion of whites in that status was only halved. Because of changes in computing the PIA and the significant annual increase in taxable earnings, the crediting of maximum earnings to an individual's social security records over the years does not mean that the worker will receive the maximum authorized PIA. Nevertheless, the higher the level of earnings credited to the worker's record the higher the benefit that can be paid, and a larger proportion of whites than blacks will have substantially higher earnings included in their benefit computations. For those workers awarded benefits in 1975 the average monthly amount was \$243.80 for white men and \$201.80 for black men.²⁷

To the extent that large differences continue to exist in the relative proportions of black and white men with covered earnings at the statutory maximum and, more importantly, in their earnings in general, commensurate differences will continue to appear in future benefit levels.

Summary and Implications

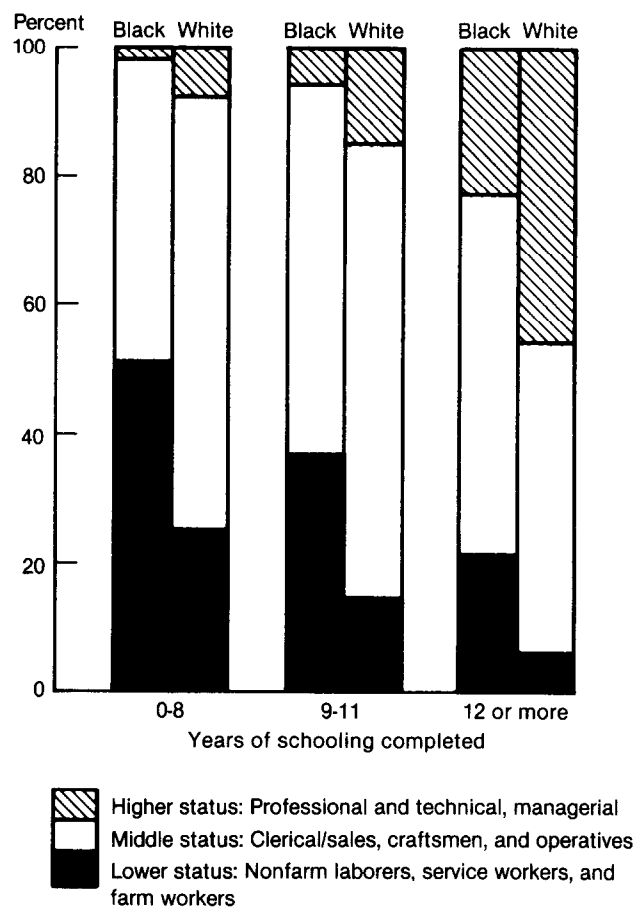
Differences in the extent of employment and level of earnings between black and white men as they went

²⁵ 1965 Annual Statistical Supplement to the Social Security Bulletin, page 56, and 1970, page 73. Data for 1965 was reported for "all workers" and "nonwhite" workers. Nonwhite is used here to represent "black." The 1970 amount for white men is from unpublished Social Security Administration data.

²⁶ Unpublished data from the Division of OASDI Statistics, Office of Research and Statistics, Office of Policy, Social Security Administration.

²⁷ 1975 Annual Statistical Supplement to the Social Security Bulletin, page 109.

Chart 5.—Occupation in 1971 and years of schooling completed, 1966: Percentage distribution of middle-aged men, by race

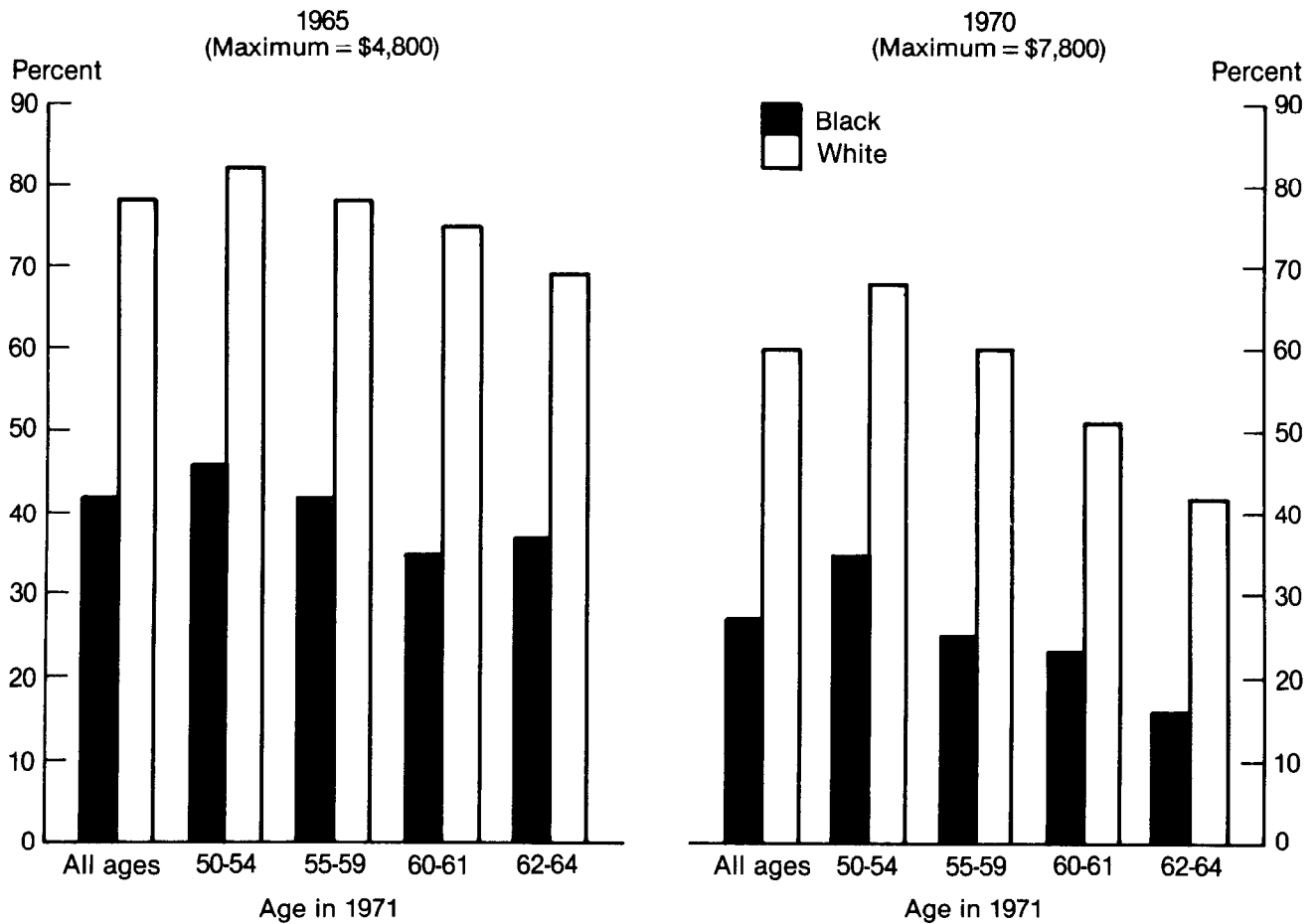


from ages 45-59 to ages 50-64 were examined in relation to health, education, and occupation. The analysis focused on differences over a 5-year period rather than at any single point in time.

At least 90 percent of all the men studied worked at some time in each survey period during 1965-71. Black men were much less likely than white men to work all year at full-time jobs, but, as measured by the ratio of black-to-white full-time, full-year workers, a slight relative improvement for blacks was evident over the survey period. The improvement, however, resulted from a sharper decline in the proportion of FT/FY white workers as they became older, rather than from an increase in FT/FY black workers.

The increase in the median annual earnings of FT/FY black workers was greater than the gain for white men but in 1970 the median for blacks was no more than 70 percent of that for whites. Because the earnings of the black workers were so low initially, their median earnings in 1970 were still below the median of their white counterparts 5 years earlier. Blacks aged 60-64 in 1971 showed a slightly larger gain relative to whites than did those aged 50-59.

Chart 6.—Percent of middle-aged men with maximum taxable earnings (in current dollars), by age and race



Comparatively smaller black-white differences were apparent with respect to health-related work limitations than with the other characteristics examined here. A great deal of similarity was found in the frequency with which health affected the ability to work, but there were some indications of a higher incidence of complete work limitations among blacks—especially those in their early sixties. The few differences in the proportion of FT/FY workers between healthy black and white men, when years of schooling was held constant, narrowed or disappeared by 1971.

Black men were considerably disadvantaged educationally compared with their white counterparts. In addition, when years of schooling completed was controlled, blacks were less likely than whites to hold full-time jobs. The relative disadvantage was greatest among the less well-educated men. Also, black-white differences in the relationship of earnings to years of schooling were sizable and very different from that found in the literature for younger men. Despite the positive relationship between years of schooling and level of earnings, better educated middle-aged black men did not always show greater gains over time than did less well-educated blacks. The pattern was different

for better-educated white men, who systematically obtained greater advances than did those with less education.

Blacks remained substantially over-represented in low-status jobs over the survey period. Regardless of educational level, white men were more likely than black men to work in the higher-status white-collar and crafts jobs. Differences in the proportion of FT/FY workers between blacks and whites in similar occupational categories were small and the percentage change in median earnings from 1965 to 1970 was about the same for both races in most of the major occupational categories. Only among operatives and nonfarm laborers was a noticeable gain evident in earnings by black men relative to white men. The black-white median earnings ratio remained lowest over the survey period among men in upper-level white-collar occupations, thus reflecting the weaker effect of college education for these black men.

To the extent that reported gains in employment opportunities and earnings are realized mostly by young, well-educated blacks but very little by older workers, large overall black-white differences will continue to be present for some time. To reduce or

eliminate the discrepancies, older and lesser educated blacks also must share simultaneously in the opportunities to work as extensively as whites with the same level of schooling and to receive earnings comparable to whites holding similar jobs. During the period after 1964, for which other studies report sizable economic gains by young blacks relative to whites, gains made by

to small that it would have taken more than 1 year for their median earnings to equal that of their white counterparts had there been no increase for whites.

An individual's work history and earnings are the key factors that determine the level of social security benefits received. If the relatively favorable position of young blacks compared with young whites is maintained over the long run, perhaps parity in retirement income will be achieved. But, if the work and earnings records of black middle-aged men relative to whites during the survey period are indicative of differences that will continue to exist between older blacks and whites over their working lifetimes, or which may develop as the younger workers become older, then substantial income differences will persist after they retire. Presently, the inequalities among older men appear likely to continue into the foreseeable future.

Technical Note

The Sample

The estimates in this article are based on data from the National Longitudinal Survey of the labor-market experience of men aged 45-59 in June 1966. This survey of "mature men" is one of four longitudinal surveys conducted by the Ohio State University Center for Human Resource Research under contract with Manpower Administration of the Department of Labor. The data were derived from personal interviews with the probability samples of the civilian noninstitutionalized population. The samples were drawn by the Bureau of the Census from 235 sample areas of the country representing every State and the District of Columbia. To provide statistically reliable estimates for comparisons between black and white men, black households were oversampled at a rate three to four times that of whites. The sample of men interviewed in 1966 consisted of 3,518 white men and 1,420 black men. The initial survey was conducted in 1966, and the respondents were reinterviewed in 1967, 1969, and 1971, as well as in an abbreviated mailed survey in 1968.²⁸

The sample used in this report is restricted to those men who were interviewed all four times, who gave a valid answer to the question on number of weeks

²⁸ For further details on the survey design and sampling procedures, see *The Pre-Retirement Years*, op. cit.

Table 15.—Median earnings, percentage change in median earnings, and black/white median earnings ratio, 1965 and 1970, of full-time, full-year workers, by occupational group and race

Year and race	Occupation						
	Pro-						
	nical, and managerial	Clerical/sales	Craftsmen	Operatives	Non-farm laborers	Service workers	Farm workers
	Median earnings						
1965:							
Black.....	\$6,750	\$6,343	\$5,818	\$5,066	\$4,285	\$4,027	\$1,433
White.....	10,177	7,742	7,672	6,594	5,447	4,960	12,730
1970:							
Black.....	8,834	8,300	7,777	7,125	6,033	5,562	12,416
White.....	13,237	9,750	9,731	8,022	7,041	7,083	13,642
	Percentage change in median earnings, 1965-70						
Black.....	31	31	34	41	41	38	68
White.....	30	26	27	22	29	43	33
	Black/white median earnings ratio						
1965.....	0.66	0.82	0.76	0.77	0.79	0.81	0.52
1970.....	.67	.85	.80	.89	.86	.79	.66

¹ Based on fewer than 50 cases.

worked during each time period, and whose reported current or last job at each interview was that of a wage or salaried worker. Precisely the same individuals were followed over the period. The subsample used in this article consists of 2,032 white men and 897 black men. The ratio of black to white men used is approximately the same as that of the original sample. Differences between the original sample and the sample used in this report with respect to distributions by age and by marital status were imperceptible.

Definitions

Work experience. Men with work experience are those who reported having worked 1 or more weeks on a full- or part-time basis during the survey period. The time periods differed during the course of the survey. During the initial interview in mid-1966 the question on work experience was asked for calendar year 1965. The 1967 and 1969 interviews covered the 12-month period preceding the interview, and the 1971 interview covered the period since the date of the last (1969) interview—approximately 2 years. Interviews took place over a 2-to-3-month period in the middle of the calendar year. The term "work experience" also includes "extent of employment."

Extent of employment. Data on the number of weeks worked and the number of hours per week usually worked were combined to indicate the amount of work performed during the survey period. "Full year" for the 1966, 1967, and 1969 interviews meant that the individ-

ual worked 50-52 weeks during the survey period. For the 1971 interview, individuals so designated worked at least 100 weeks since the last interview. "Full time" meant that the individual usually worked 35 hours or more per week. The categories used were: (a) Full time/full year, (b) full time/part year, and (c) part-time. In some instances categories (b) and (c) were combined and referred to as "less than full time/full year."

Earnings. Total money earnings is the sum of wages and salaries, commissions, and tips received from all jobs during the specified calendar year, before any deductions.

In matching extent of employment with earnings data, some inconsistencies were present. Specifically, all earnings data were obtained on a calendar-year basis, but as explained above, work-experience data covered various survey periods. In table 12, for example, only for 1965 were earnings and employment information both obtained for the same period. For 1966 earnings the work-experience reference year is 1966-67, and for 1968 earnings, it is the 1968-69 survey period. These inconsistencies could have resulted in some incongruities with respect to the level of total earnings for some full-time, full-year (FT/FY) workers—that is, total earnings for 1968 might be shown for an individual as a FT/FY worker based on the extent of his employment during 1968-69, but it is possible that he had a period of no earnings in the early part of 1968. Since the 1971 interview covered the period from 1969-1971, FT/FY workers for 1970 are properly classified. In this instance, however, the number of men indicated as FT/FY workers for 1970 may have been underestimated. An individual who was actually employed FT/FY in 1970, but not so classified for the survey period 1969-71, would not be included.

Rounding Procedures and Size of Base

All percentages are rounded to the nearest whole number. As a result, the percentages in a distribution do not always add to exactly 100 even though the totals are shown as 100.

Whenever the base of a percentage distribution is very small, the medians and percentages are unreliable. In this article percentages are shown in all cells having a base of at least 25 sample cases. To offer some statistical reliability, however, analyses are generally not made based on fewer than 50 sample cases. In some instances, it was necessary to give interpretations of relevant characteristics of black men using a base of fewer than 50 cases (never below 25) to make comparisons between black and white men. The reader should be mindful that sampling error in such cases may be very high.

Reliability of Estimates

Since this analysis is based on a sample, all reported statistics—counts, percentages, and medians—are only estimates of population parameters and may deviate somewhat from their true values—that is, from the values that would have been obtained from a complete count of the population. Particular care should be exercised in the interpretation of figures based on relatively small numbers of cases as well as small differences between figures. As in any survey work, the results are subject to errors of response and nonreporting and to sampling variability.

The standard error is primarily a measure of sampling variability—that is, of the variations that occur by chance because a sample rather than the entire population is surveyed. Because the probability that a given individual would appear in the sample is known, it is possible to estimate the sampling error, at least roughly. The standard error of the statistic is generally used for this purpose. Generally speaking, the chances are about 68 out of 100 that an estimate from the sample would 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 would be less than twice the standard error.

Standard error of estimated percentages. The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends on both the size of the percentage and the size of the total on which the percentage is based. Estimated percentages are relatively more reliable than the corresponding absolute estimates of the numerators of the percentages, particularly if the percentage is large (50 percent or more).

Tables of standard errors of the estimated percentages of black persons (table I) and of white persons (table II) are shown below. These tables contain approximations of the standard errors of various estimates shown in this article and provide an indication of the order of magnitude of the standard errors rather

Table I.—Standard errors of estimated percentages of black persons

[68 chances out of 100]

Base of percentage (unweighted sample)	Estimated percentage						
	1 or 99	5 or 95	10 or 90	15 or 85	20 or 80	35 or 65	50
25	2.7	6.0	8.2	9.6	10.9	12.3	13.7
50	1.9	4.2	5.8	6.8	7.7	8.7	9.7
100	1.4	3.0	4.1	4.8	5.5	6.2	6.8
200	1.0	2.1	2.9	3.4	3.9	4.4	4.8
300 .....	.9	1.9	2.6	3.1	3.6	4.0	4.1
500 .....	.7	1.6	2.1	2.5	2.9	3.2	3.3
750 .....	.5	1.1	1.5	1.8	2.0	2.3	2.5
900 .....	.5	1.0	1.4	1.6	1.9	2.1	2.3

Table II.—Standard errors of estimated percentages of white persons

Base of percentage (unweighted sample)	[68 chances out of 100]						
	Estimated percentage						
	1 or 99	5 or 95	10 or 90	15 or 85	20 or 80	35 or 65	50
25.....	2.8	6.1	8.4	9.8	11.2	12.6	13.9
50.....	2.0	4.3	5.9	6.9	7.9	8.9	9.9
125.....	1.2	2.7	3.7	4.4	5.0	5.6	6.2
250.....	.9	1.9	2.6	3.0	3.5	4.0	4.4
500.....	.7	1.6	2.2	2.6	3.0	3.4	3.8
750.....	.6	1.3	1.9	2.2	2.6	2.9	3.2
1,000.....	.5	1.1	1.6	1.8	2.1	2.4	2.6
1,250.....	.4	.9	1.2	1.4	1.6	1.8	2.0
2,000.....	.3	.8	1.1	1.3	1.5	1.7	1.9

than the precise standard error of any specific item. Use of these tables in calculating the standard error of a single percentage and the standard error of the difference between two estimated percentages are also illustrated below.

Table 4 shows that, of all white men aged 45-59 in 1966 who completed 8 years or less of schooling, an estimated 74 percent worked full time, full year in 1965. Since the base of this percentage is 703 sample cases, interpolation in table II shows that the standard error of the estimated 74 percent is approximately 2.6. The chances are 68 out of 100 that the estimate would have shown a figure differing from a complete census by less than 2.6 percent. The chances are 95 out of 100 that the estimate could have shown a figure differing from a complete census by less than 5.2 percent. Thus, the 95-percent confidence interval would range from 69 percent to 79 percent (74 ± 5.2 , both rounded to the nearest whole number).

For the difference between two sample estimates, the standard error is approximately equal to the square root of the sum of the squares of the standard errors of each estimate considered separately. This formula will represent the actual standard error quite accurately for the difference between two estimates of the same characteristics in two different areas or for the difference between separate and uncorrelated characteristics in the same area. If, however, a high positive correlation exists between the two characteristics, the formula will overestimate the true standard error. The magnitude of the quotient produced by dividing the difference between any two percentages by the standard error of the difference determines whether that difference is significant.

A comparison of the difference in the proportion of full-time, full-year workers in 1965 between black and white middle-aged men who had not gone beyond the eighth grade illustrates how to calculate the standard error of a difference between two percentages. Seventy-four percent of the white men and 64 percent of the black men who completed 8 years or less of schooling

worked full time, full year in 1965—a difference of 10 percentage points. The standard errors of these percentages are 2.6 percent and 2.8 percent, respectively. The standard error of the estimated difference of 10 percentage points is:

$$3.8 = \sqrt{(2.6)^2 + (2.8)^2}$$

The chances are thus 68 out of 100 that the estimated difference based on the sample would differ by less than 3.8 percentage points (rounded to 4.0) from that derived by using complete census figures. The chances are 95 out of 100 that it would differ by less than 7.6 percentage points (rounded to 8.0). At both levels of confidence, therefore, the proportion of white men with no more than 8 years of schooling who worked full time, full year is greater than the proportion of black men in the same category.

Confidence limits of medians. The sampling variability of an estimated median depends on the distribution and the size of the base. Confidence limits of a median based on sample data may be estimated as follows: (1) From table I or II, using the appropriate base, determine the standard error of a 50-percent characteristic; (2) add to and subtract from 50 percent the standard error determined in step 1; and (3) on the cumulated distribution of the variable in question, use linear interpolation to find the values that correspond to the limits in step 2. A two-standard-error confidence limit may be determined by finding the values corresponding to 50 percent plus and minus twice the standard error shown in the tables.

To illustrate, the median earnings in 1965 of black middle-aged men who worked full time, full year in wage and salary jobs was \$4,837.

1. The standard error of 50 percent for these full-time, full-year workers (sample size 625) expressed as a percentage is about 2.9 percent (derived from table I).
2. As interest usually centers on the confidence interval for the median at the two-standard-error level, it is necessary to add and subtract from 50 percent twice the standard error obtained in step 1. This procedure yields limits of about 44.2 and 55.8 (rounded to 44 and 56).
3. Since 40 percent of the men had earnings below \$4,000 and 12 percent had earnings of \$4,000-\$4,999, the dollar value of the lower limit may be found by interpolation to be:

$$\frac{(44 - 40) \times \$1,000}{12} + \$4,000 = \$4,333.$$

4. Since 52 percent of the men had earnings below \$5,000 and 15 percent had earnings of \$5,000-\$5,999, the dollar value of the upper limit may be found by linear interpolation to be:

$$\frac{(56 - 52) \times \$1,000}{15} + \$5,000 = \$5,267.$$

Thus, the estimated median earnings of black middle-aged, full-time, full-year wage or salaried workers in 1965, derived from all possible samples, lies within the interval \$4,333-\$5,267 with 95 percent confidence.