Fifth Annual Report
to the President and the Congress of the
National Commission for Employment Policy

B

Expanding Employment Opportunities for Disadvantaged Youth:

Sponsored Research

Special Report No. 37
National Commission for Employment Poicy
Suite 300, 1522 K Street, N.W.
Washington, D.C. 20005

December 1979

CHANGES IN RACE DIFFERENTIALS IN YOUTH UNEMPLOYMENT AND LABOR FORCE PARTICIPATION, 1950-1978: PRELIMINARY ANALYSIS

by

Robert D. Mare

and

Christopher Winship

Robert D. Mare is assistant professor of sociology at The University of Wisconsin. Christopher Winship is a senior study director at The National Opinion Research Center, Chicago, Illinois. This paper is their final report to the NCEP. The authors are grateful to Carol Jusenius and Wendy Wolf for advice in preparing this report; to Jennifer Peck of the U. S. Bureau of the Census for supplying unpublished Department of Defense data; to Warren Kubitschek, Wayne Bigelow, and Judith Davinich for research assistance; and to Ann Wallace for editorial and secretarial assistance.

CONTENTS

CHANGES IN RACE DIFFERENTIALS IN YOUTH UNEMPLOYMENT AND LABOR FORCE PARTICIPATION, 1950-1978: PRELIMINARY ANALYSIS

I. INTRODUCTION

Since 1950 there has been considerable change in the relative labor force standing of black and white youths. At the end of World War II blacks and whites under 25 years old were equally likely to be unemployed or out of the labor force, but by the late 1970s the unemployment rate of black youths is several times that of whites, and blacks' labor force participation rate is approximately half that of whites.

This paper reports preliminary research that casts light on the changes in the relative labor force standing of black and white men and women aged 16-29 since 1950. It is well known that the relative standing of black youths with respect to unemployment and labor force participation has worsened in recent years. In addition, there has been considerable speculation about the sources of change in the relative status of black and white youths. Past commentary on youth labor force trends, however, has given insufficient attention to the timing of the deterioration in relative labor market standing of young blacks and to differences in labor force trends among subgroups of the black youth population. Nor has there been sufficient attention to other social and economic trends that have accompanied the labor force trends. In particular, there have been significant changes in the fraction of youths engaged in other activities, notably school attendance and military service, since World War II. Also, social and demographic factors and the composition of the youth population, which may be important causes of the youth labor force status, have changed significantly. Nor, finally, has there been much attempt to evaluate empirically the array of explanations for youth labor force trends that have been offered.

In a companion paper (Mare and Winship, 1979a), we have critically reviewed many of the proposed explanations for the deteriorating relative labor force status of black and white youths. In this paper, we report analyses of our own that attempt to correct some of the shortcomings in past work on youth labor force trends.

Using published census and Current Population Survey (CPS) tabulations, unpublished Department of Defense data, and microdata from the March CPS, we provide a detailed description of youth labor force trends, paying particular attention to differences among age groups within the youth population in the timing and severity of the worsening of the relative status of young blacks. We also focus on social trends that have accompanied this deterioration. This focus has several parts: a review of trends in the activities of youths both in and out of the labor market, an analysis of trends in social correlates of labor force status that may have differentially affected black and white youths, and a description of changes in the youth occupational structure. Where possible, we have attempted to examine the effects of a number of factors simultaneously, although much further work remains to be done in this regard.

In our analysis of possible causes of trends in the youth labor force, we have focused on factors that have not been emphasized by previous researchers, rather than on the full set of explanations that have been suggested. We focus, in particular, on the effects of changes: (1) in the occupational structure of the youth labor force and (2) of changes in social and demographic composition of the youth population. The latter changes include trends in school enrollment, family living arrangements, marital status, social welfare recipiency, and educational attainment. The possible effects of occupational and social and demographic changes on labor force status are discussed in detail in our companion paper (1979a) and are outlined below in the sections of this paper that address them empirically.

The analyses reported here are preliminary. In the time available to us to prepare this report, we have been unable fully to exploit available data, especially the microdata from the March Current Population Surveys. We have not examined explanatory factors that, in retrospect, seem important to us. We have made comparisons using pairs of years selected primarily for analytic convenience. We do not think that these choices seriously affect our results, but this issue should be explored further. We have sometimes assumed causal relations among variables that cannot be inferred from the series of cross-sectional surveys that we have used. We have defended our assumptions, but fully recognize that further analyses, preferably of panel data, are needed. Finally, in places, we have presented descriptive results, but have gone on to suggest causal mechanisms that may give rise to them. In these instances we do not pretend to have rigorously tested the interpretations presented. Rather, we take our descriptive results as suggestive of possible explanations of labor force trends. Still, this is preliminary to--not a substitute for--the development and evaluation of models of mechanisms that we have conjectured. In short, this paper is a progress report on our ongoing work (Mare and Winship, 1979c).

Despite these limitations, we can nonetheless make several tentative conclusions from the analyses reported here. Our main conclusions are as follows.

(1) The period of deterioration in the labor force standing of black youths comprises two eras. The period 1950 through 1970 consists almost exclusively of a deterioration in the relative standing of black teenagers. Since the late 1960s, however, black youths in their twenties, particularly the 20-24 age group, as well as teenagers, have experienced deteriorating relative labor market standing. Thus the problem of black youth unemployment has generalized from teenagers to all young adults.

(2) The rise in black youth unemployment and decline in labor force participation have been accompanied by major shifts in other activities of black youths. Two trends are most salient. One is a dramatic increase in school enrollment rates for black youths since 1950. Enrollment trends have affected labor force trends in a number of ways that are more fully discussed elsewhere (Mare and Winship, 1979a, 1979b). The most salient effect is simply that, to a large extent, black youths are substituting schooling for work to a greater degree than they have in the past. The second trend is a substantial relative increase in young black men's participation in the armed forces during the most recent period. Under the volunteer army, blacks have enlisted disproportionately, a reversal of historic white predominance in the military. To a degree, therefore, black youths have substituted armed forces enlistment for civilian labor force participation.

(3) Over the 1950 the 1970 period, two major developments are major sources of the deteriorating relative standing of black youths. One is the strong upward trend in school enrollment rates of blacks. The other is the substantial decline in available agricultural employment. There is clear evidence that much of the reduced labor force participation of blacks results from their rising school enrollment. School enrollment trends may also have affected trends in black youth unemployment rates. Enrollment increases may have eliminated from the labor force those youths who would be most likely to obtain jobs. Thus the average "employability" of the black youth labor force may have declined. We present indirect evidence for this conjecture elsewhere (Mare and Winship, 1979a, 1979b). The design of our analyses reported here does not permit us to test it.

The proportion of black youths employed as farm workers declined dramatically over the 1950-1970 period, whereas declines in farm work for white youths occurred primarily prior to 1950. This suggests that a substantial part of the decline in employment among black youths during this period results from the elimination of low-skilled farm jobs.

(4) Since the late 1960s, school enrollment trends continue to account for youth employment trends for most age-sex groups. By 1970, however, the farm labor population is so small that much further contraction is not possible.

(5) During the 1970s several other social trends have affected labor force trends, at least for some age-sex groups in the black population. There has been a dramatic increase in the receipt of public

assistance by black women in their twenties. Both cross-sectionally and over time the receipt of public assistance is associated with being out of the labor force or unemployed. The causal relationship between welfare recipiency and labor force behavior is complex and hard to infer from a series of cross-sectional surveys. Part of the deterioration of employment for black women may nonetheless be accounted for by increased dependency on welfare. For black men in some age groups, there has been a substantial decline in the proportion who are married. Although the relationship between marital and employment status is complex, declines in proportions of men with the responsibility of supporting a family may explain part of the reductions in labor force participation.

(6) The labor force standing of black youths has benefited from secular improvement in their average levels of educational attainment. To a large degree, increased education offsets the negative impact of other sociodemographic trends.

The outline of this report is as follows. It first describes unemployment trends since the early 1950s and then turns to the activities of youths more generally, focusing on military and schooling as well as employment trends. Then it presents analyses based on the decennial censuses of change in the youth labor force between 1950 and 1970. This is followed by analyses of trends between 1968 and 1978 based on microdata from the March CPS's. A final section summarizes our findings.

II. UNEMPLOYMENT TRENDS

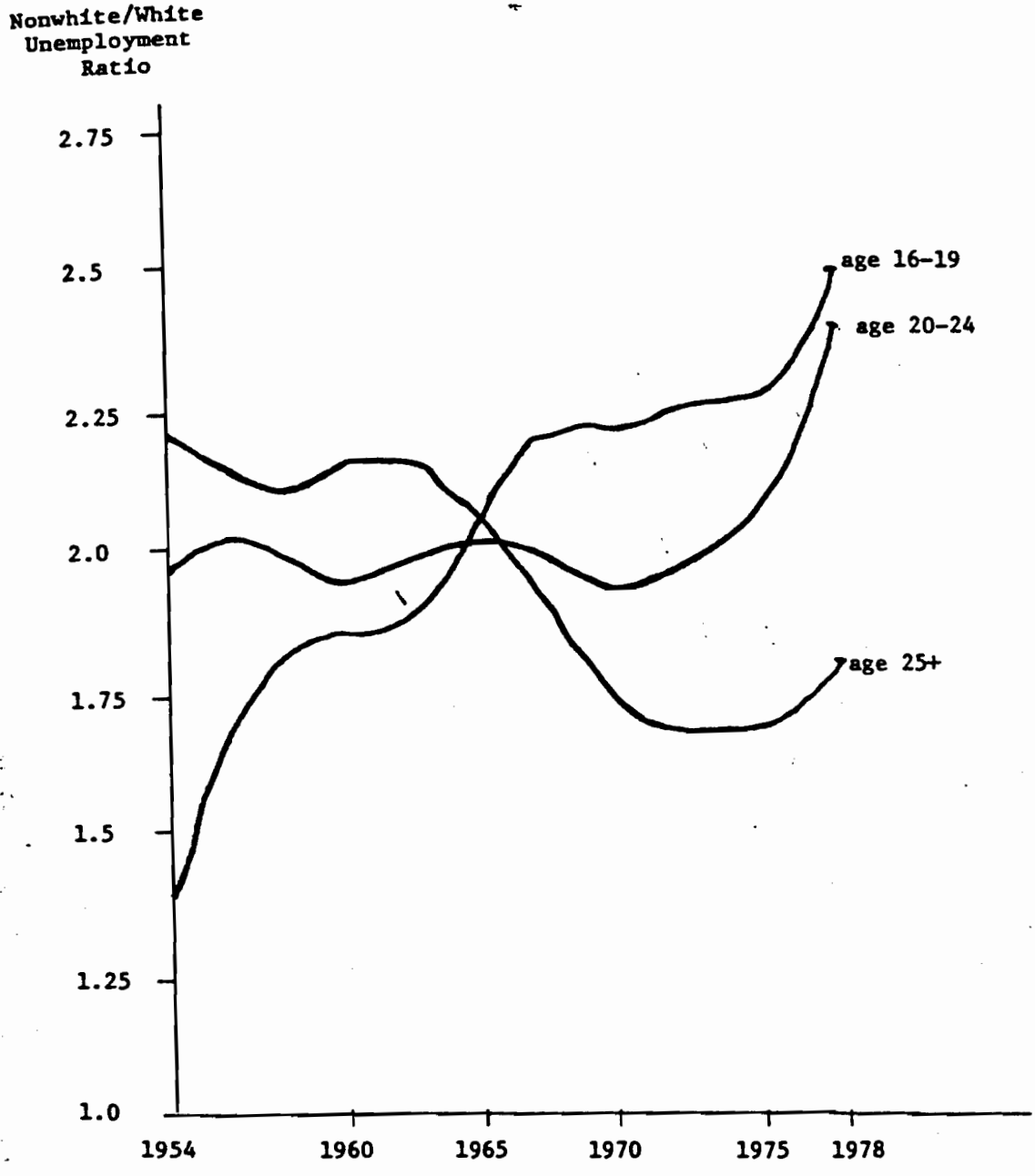
Figure 1 presents trends in the ratio of the nonwhite to white unemployment rate since 1954 for both sexes combined for persons aged 16-19, 20-24, and 25 and over.1/ (More detailed tabulations of these trends are presented in Table A1 of the Appendix.) There are marked differences among age groups in the relative unemployment trends. For teenagers the relative position of nonwhites steadily worsened between the mid-1950s and the late 1960s. In the first half of the 1970s, however, this deterioration was only modest for teenagers, but this has been followed by a sharp upswing in the ratio. For 20-24 year-olds, the trend has been radically different. There was no worsening in the relative

---

1/ Because we rely on a number of data sources, our data do not preserve a consistent definition of racial groups. Earlier published tables employ a white-nonwhite classification. Blacks constitute approximately 90 percent of the nonwhite group. Some later published tables employ a white-black classification. Other tables, as well as our own tabulations from microdata, use a nonblack-black classification. Whites constitute approximately 99 percent of the nonblack group. Throughout this report we use these different categories as they apply to the tables under discussion, but assume that all tabulations reflect black-white differences. We are confident that none of our conclusions depends upon the racial classification used in any part of our analysis.

FIGURE 1

RATIO OF NONWHITE TO WHITE YOUTH UNEMPLOYMENT RATES, 1954-1978*



Source: U. S. Department of Labor.

* Data are smoothed five times using three-year moving averages.

position of nonwhites for most of the observed period, but in the 1970s--and especially in the past few years--the relative position of nonwhites in this group deteriorated markedly. Yet another pattern obtains for adults. The relative employment status of nonwhites improved steadily from the mid-1950s until the mid-1970s, but, as for youths, has worsened in recent years.

These trends suggest that the sources of relative employment trends during the past three decades may differ between the 1950s and 1960s on the one hand and the 1970s on the other. The worsening position of black teenagers is largely concentrated in the former period, and the worsening position of blacks in their early twenties occurs only in the 1970s. The alarmingly steep increases in relative unemployment for blacks in the late 1970s suggest yet another era for the youth labor market. Because the late 1970s are at the end of the time series, however, this is hard to ascertain. In our analyses of change in the labor force presented below, we consider the 1950-1970 and the 1968-1978 periods separately. In part this is because of data limitations, but it also reflects the differences in trends before and after 1970.

III. TRENDS IN THE ACTIVITIES OF YOUTH

Unemployment occurs in the context of a number of other activities of youths, such as attending school, serving in the armed forces, housekeeping, and child care. These activities often substitute for labor force participation and thus their trends are interdependent with labor force trends. This section describes trends in some of these activities during the past 15 years, as shown in October Current Population Surveys and unpublished Department of Defense data. In particular, we first focus on work, schooling, and armed forces participation for young men, and then work and schooling for young women.

Table 1 presents the percentages of young men engaged in various combinations of schooling, work, and military service. Columns 1 and 6 show the percentages of youths employed for whites and nonwhites respectively. For nonwhites, the percentage employed has dropped between 10 and 16 points since 1964, whereas for whites employment has increased by more than 10 points in every age group. Thus the trend in percentages employed suggests that the labor force status of black youths has deteriorated both relative to that of whites and absolutely as well. At the same time nonwhite youths have substantially increased their school enrollment rates, particularly at the older ages. For whites, by contrast, enrollment rates have fluctuated and, for 18-19 year-olds, have declined somewhat during the 1970s.

These race-specific enrollment and employment trends suggest that over the past 15 years at least some of the decline in black youth employment has resulted from blacks' increasing tendency to substitute schooling for work and, for whites in their late teens, observed increases in employment are at the cost of substituting work for school attendance. This can be seen explicitly in columns 3 and 8 which report the percentages of white and nonwhite youths respectively who are employed or enrolled in school. For white teenagers, though not for 20-24 year-olds, trends in

TABLE 1

TRENDS IN ACTIVITIES OF YOUNG MEN, 1964-1978

Age	Year	White					Nonwhite				
		Employed	Enrolled	Employed or Enrolled	In Military	Employed, Enrolled, or in Military	Employed	Enrolled	Employed or Enrolled	In Military	Employed, Enrolled, or in Military
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
16-17	1964	32.7	89.1	95.3	1.4	96.7	28.1	84.1	90.5	0.9	91.6
	1965	37.0	87.2	94.9	1.6	96.5	31.7	82.5	93.5	1.0	94.4
	1966	38.6	89.1	95.0	1.4	96.4	25.7	86.4	92.3	0.8	93.1
	1967	38.8	90.6	95.8	0.9	96.7	25.6	87.5	94.2	0.6	94.8
	1968	38.9	91.4	96.6	0.8	97.3	21.2	88.5	92.4	0.4	92.8
	1969	39.3	91.3	96.4	0.9	97.4	27.8	87.0	95.2	1.1	96.2
	1970	36.4	91.4	95.9	0.8	96.7	19.3	85.5	91.2	0.5	91.7
	1971	37.1	91.3	95.9	0.7	96.7	16.6	89.9	93.5	0.5	94.0
	1972	39.3	89.5	95.2	1.0	96.2	15.5	88.2	93.5	0.8	94.3
	1973	43.6	88.5	95.2	1.0	96.2	17.4	88.5	93.4	0.9	94.3
	1974	42.2	87.3	94.8	1.0	95.8	20.8	89.6	93.4	1.3	94.7
	1975	39.3	90.3	95.1	0.8	95.9	13.5	88.4	90.7	0.6	91.4
	1976	39.3	89.8	94.9	0.8	95.8	16.6	89.5	93.7	0.7	94.4
	1977	44.0	88.8	94.8	0.8	95.6	16.8	91.7	94.7	0.9	95.5
	1978	43.6	90.5	95.7	0.5	96.4	17.5	93.8	95.2	0.4	96.3
18-19	1964	49.4	46.3	80.4	11.6	92.0	52.5	37.6	77.8	7.5	85.4
	1965	48.2	50.3	82.3	11.2	93.5	47.1	43.8	79.0	7.8	86.8
	1966	47.2	50.9	79.9	13.8	93.7	45.3	44.4	79.1	9.5	88.7
	1967	45.2	46.4	74.1	18.8	93.0	41.2	45.3	76.8	10.6	87.4
	1968	49.2	54.0	81.6	12.0	93.7	45.1	49.3	78.8	8.2	87.0
	1969	49.9	53.8	82.2	11.7	93.9	47.2	45.1	76.8	9.7	86.5
	1970	49.5	50.8	81.7	9.4	91.1	38.8	40.7	70.8	7.5	78.3
	1971	51.8	51.3	82.8	8.0	90.8	41.9	48.9	78.1	6.8	84.8
	1972	56.7	47.5	84.0	7.8	91.8	40.9	44.8	74.8	8.0	82.8
	1973	58.3	44.7	84.0	7.8	91.8	46.1	40.7	76.2	9.3	85.5
	1974	57.2	42.1	81.6	7.5	89.1	39.0	42.4	71.2	10.3	81.5
	1975	54.0	46.0	82.4	7.3	89.7	33.5	47.0	69.4	9.0	78.4
	1976	56.3	43.6	82.0	7.0	89.0	30.1	51.1	68.5	8.3	76.7
	1977	59.9	44.6	85.2	6.5	91.7	32.8	48.3	69.9	8.8	78.7
	1978	62.3	51.4	89.3	5.8	95.3	36.6	52.5	77.5	9.0	86.8
20-24	1964	64.7	21.2	76.4	17.4	93.9	72.3	8.8	76.8	12.8	89.5
	1965	65.2	24.7	78.3	17.4	95.6	74.1	10.2	79.8	13.2	93.0
	1966	63.4	25.2	77.2	20.2	97.4	72.2	10.4	77.8	15.1	92.9
	1967	62.3	25.5	75.9	20.7	96.6	66.6	15.9	74.5	15.3	89.8
	1968	59.3	24.9	71.8	23.5	95.3	62.1	13.1	70.2	19.5	89.7
	1969	60.0	26.2	73.4	22.1	95.4	63.9	16.7	73.7	18.5	92.2
	1970	60.8	25.1	74.0	18.9	92.9	58.9	15.2	68.5	15.7	84.2
	1971	64.2	25.6	77.0	15.4	92.4	58.4	19.2	71.7	12.7	84.4
	1972	68.3	25.2	81.1	11.3	92.4	65.5	20.8	76.2	11.0	87.3
	1973	73.0	23.5	84.3	9.7	94.0	64.7	17.9	74.8	10.7	85.5
	1974	72.8	23.6	84.2	8.5	92.7	61.1	23.0	74.2	11.6	85.7
	1975	67.9	25.1	81.4	7.6	89.0	54.8	19.3	67.2	11.5	78.7
	1976	71.7	24.2	83.5	7.2	90.6	53.9	22.6	66.8	11.3	78.1
	1977	73.9	23.9	85.3	6.9	92.2	54.9	24.3	70.3	11.3	81.6
	1978	75.8	28.1	87.5	6.7	94.1	56.9	25.8	72.9	12.7	84.1

Source: October Current Population Survey and unpublished Department of Defense tabulations.

percentages either enrolled or employed are much more moderate than in percentages in either activity considered separately. For 16-17 year-old nonwhites, the percentages enrolled or employed have increased over time and there have been much more moderate declines for older youths than observed in the percentages employed. This suggests that although the relative status of nonwhite youths aged 18-24 has worsened, trends in employment per se give a misleadingly dismal picture. To a considerable degree, black youths are leaving work because they are increasing their school enrollment.

Columns 4 and 9 show the percentage of youths in the armed forces. Since the end of the Vietnam War the military population has declined, but much more so for whites than for nonwhites. Whereas whites were disproportionately in the military before and during the Vietnam War, now nonwhites are disproportionately in the military. This has important implications for whether individuals in the military are counted as employed or not (National Commission for Employment and Unemployment Statistics, 1979). Including those in the military would indicate a stronger employment position for whites in 1970 relative to nonwhites, and a weaker position in 1978. Thus inclusion of the military with the employed would decrease the observed upward trend in the nonwhite-white unemployment ratio between 1970 and 1978.

Columns 5 and 10 show the percentage of the population that is either employed, in school, or in the military in October of each year. Roughly speaking, this measure represents the percentage of young men engaged in productive activity. For nonwhite 16-17 year-olds this ratio has increased, albeit with considerable variability, and for whites it has remained almost constant. For the older groups, the ratio appears to decline for both nonwhites and whites.

It is natural to ask whether the trends in this ratio have changed more for whites or for blacks. Table 2 shows the ratio of nonwhite to white inactivity rates. (The inactivity rate is one minus the proportion either employed, enrolled, or in the armed forces. An increase in this measure signals a worsening situation for blacks.)2/ For 16-17 year-olds, there is clear improvement in the relative position of blacks since 1964. For the older age groups, however, it is unclear whether there has been any deterioration for nonwhites relative to whites.

In considering young women we have excluded armed forces participants, since they are never more than one percent of the population. The interpretation of employment and enrollment trends for women is more complex than for men because housework and child care are much more likely to take up significant amounts of time for women than for men, and this tendency changes over time. Unfortunately, published data for the 1964-1978

2/ We use the term "inactivity rate" in a somewhat different way from Bowen and Finegan (1969) and others who include the unemployed among the "active" irrespective of whether they are in school. So long as they are not in school, the unemployed are classified as inactive in the measure reported in Table 2.

TABLE 2

RATIO OF NONWHITE TO WHITE INACTIVITY RATES, OCTOBER 1964-1978

Year	Males Age 16-17	Males Age 18-19	Males Age 20-24	Females Age 16-17	Females Age 18-19	Females Age 20-24
1964	2.59	1.82	1.70	1.20	1.13	1.00
1965	1.58	2.04	1.61	1.32	1.50	0.91
1966	1.90	1.79	2.70	1.63	1.49	1.10
1967	1.58	1.79	3.03	1.71	1.49	1.03
1968	2.68	2.06	2.17	1.81	1.33	1.00
1969	1.43	2.23	1.72	1.56	1.57	1.00
1970	2.54	2.43	2.21	1.56	1.30	1.32
1971	1.82	1.65	2.06	1.41	1.29	1.13
1972	1.49	2.09	1.68	1.20	1.58	1.03
1973	1.51	1.77	2.43	1.36	1.82	1.25
1974	1.25	1.69	1.96	1.88	1.42	1.28
1975	2.13	2.09	1.94	1.45	1.44	1.36
1976	1.32	2.12	2.34	1.42	1.53	1.35
1977	1.00	2.55	2.37	1.57	1.54	1.41
1978	1.05	2.81	2.68	1.39	2.11	1.39

Source: Tables 1 and 3.

period do not permit us to incorporate these activities into our analysis.3/

Table 3 shows that the percentage of young white women who are employed has increased since 1964 between 13 and 20 percent (column 1). For nonwhites, however, there is no increase, and for 18-19 year-olds there is a decrease of seven percentage points (column 4). These patterns parallel the trend for men for whom employment increases slightly for whites and decreases for nonwhites. The trends for men and women would apparently have been close to identical in the absence of secularly increasing women's labor force participation overall.

There have also been significant increases in the proportion of young women enrolled in school. As columns 2 and 5 of Table 3 show, the increases have been larger for women than for men and, among women, greater for older and nonwhite women than for younger and white women.

The enrollment and employment trends considered alone suggest that the proportion of young women of either race who are neither enrolled nor employed has declined since 1964. Columns 3 and 6 of Table 3 show that the proportion of women either enrolled or employed has increased over time for all age-color groups. These trends no doubt result from secular declines in the proportion of women devoting themselves exclusively to housework and child care. The last three columns of Table 2 show that for teenage women the relative proportions of white and nonwhite women who are not active in school or work have fluctuated from year to year, with no overall trend. As in the case of men, however, 20-24 year-old white women have increased their overall activity levels more over time than have black women, resulting in an increasing ratio of inactivity rates. On the whole, therefore, the trends in those activities that we have measured are similar for young men and women, although for women they occur in the context of increasing labor force participation overall.

In contrast to our description of unemployment trends, patterns of schooling, military service, and employment activities show much more limited evidence of worsening relative status of black youths. Although the labor force status of black youths has deteriorated relative to that of whites, there has been only a modest decline in the relative numbers of black youths engaged in productive activities generally, and this has been concentrated among the oldest youths. Elsewhere we have suggested a number of mechanisms producing this paradox (Mare and Winship, 1979a), and these are investigated to a limited extent below. Suffice it to note at this point, however, that whereas a serious black youth labor market problem exists, it has not resulted in large increases in the proportions of black youths engaged in no productive activities at all.

3/ Microdata from the March Current Population Survey show that the proportion of women reporting "housework" as their major activity has declined considerably since 1968. For whites it declines from 12 and 41 percent for 16-19 and 20-24 year-olds respectively in 1968 to 10 and 28 percent for 1978. For blacks, the percentage declines from 20 and 41 percent in 1968 to 16 and 32 respectively in 1978. It is unclear, however, how reported major activity trends combine with enrollment and employment trends.

TABLE 3

TRENDS IN ACTIVITIES OF YOUNG WOMEN, 1964-1978

Age	Year	White			Nonwhite		
		Employed	Enrolled	Employed or Enrolled	Employed	Enrolled	Employed or Enrolled
		(1)	(2)	(3)	(4)	(5)	(6)
16-17	1964	21.9	86.1	90.4	15.4	82.0	88.5
	1965	26.5	87.0	91.5	14.3	85.9	88.8
	1966	27.6	87.6	92.0	13.0	83.7	86.8
	1967	27.7	87.4	92.0	15.4	82.3	86.2
	1968	27.5	89.4	92.8	14.5	84.7	86.9
	1969	31.3	88.2	92.4	15.7	85.1	88.2
	1970	30.5	89.0	92.5	14.6	86.3	88.3
	1971	29.6	88.9	92.6	10.7	87.7	89.6
	1972	32.0	87.3	92.2	10.6	89.4	90.6
	1973	36.3	87.2	92.6	13.2	86.8	89.9
	1974	37.0	87.6	93.2	11.1	84.2	87.1
	1975	34.4	87.5	91.6	13.9	85.7	87.8
	1976	35.0	87.7	91.8	7.9	87.9	88.4
	1977	36.8	87.8	93.4	11.6	87.3	89.7
	1978	41.7	90.2	95.4	15.0	92.4	93.6
18-19	1964	42.0	33.7	68.1	36.8	34.0	63.8
	1965	45.7	38.3	73.4	30.7	33.5	59.9
	1966	46.9	38.6	73.6	36.5	31.9	60.6
	1967	43.8	40.9	73.8	37.6	36.0	61.1
	1968	45.2	41.3	74.6	35.5	40.6	66.2
	1969	49.6	41.8	77.7	34.3	41.5	65.1
	1970	47.2	41.8	74.5	38.1	34.8	66.8
	1971	45.0	43.2	73.3	28.5	44.6	65.6
	1972	48.9	41.8	76.1	25.5	41.2	62.3
	1973	51.9	38.6	76.4	28.4	35.3	56.9
	1974	51.0	39.9	76.3	29.9	45.2	66.3
	1975	48.5	43.5	76.0	28.7	47.8	65.5
	1976	52.2	44.0	78.0	28.1	46.8	66.4
	1977	52.7	43.4	78.0	29.3	47.4	66.0
	1978	55.5	54.8	86.8	29.4	53.8	72.0
20-24	1964	45.9	11.3	53.2	48.6	8.3	54.3
	1965	46.3	12.2	54.0	52.7	8.9	58.3
	1966	48.4	12.9	56.6	47.4	8.6	52.4
	1967	49.3	15.4	58.6	50.5	12.6	57.2
	1968	51.2	14.6	59.8	52.8	12.3	59.7
	1969	53.1	16.3	61.8	54.3	13.7	62.4
	1970	54.7	15.5	62.5	40.8	15.2	50.7
	1971	54.5	15.5	63.0	46.4	16.8	58.2
	1972	47.5	19.6	57.7	47.2	13.3	56.4
	1973	58.9	17.0	67.4	49.5	15.0	59.3
	1974	59.8	17.8	68.0	49.9	14.8	59.0
	1975	58.7	18.6	67.6	44.1	19.7	56.0
	1976	59.7	20.8	69.5	44.5	20.7	58.7
	1977	62.4	19.8	71.2	45.2	21.2	59.4
	1978	65.7	23.1	75.9	50.8	27.6	66.5

Source: October Current Population Survey.

IV. SOURCES OF CHANGE: 1950-1970

In this and the following section we present empirical investigations of possible sources of change in race differentials in unemployment and labor force participation. This section focuses on analyses of the 1950-1970 period using decennial census data, and the next on analysis of the 1968-1978 period using microdata from the March Current Population Survey. For 1950-1970 two major sources of change are considered, trends in school enrollment rates and in occupational distributions. For the 1968-1978 period a somewhat fuller set of demographic trends as well as changes in occupational distributions are investigated. It would be fruitful to examine a fuller set of possible causes of labor force trends for the 1950-1970 period, but the constraints of time and the difficulty of constructing comparable tabulations across censuses precluded this. Still, those factors considered in this section are very important to understanding labor force trends. As stressed at the outset, the analyses presented here are preliminary, but they nonetheless cast light upon sources of change in the youth labor force.

A. Labor Force Participation and School Enrollment

One of the strongest social trends in the post-World War II era has been the increase in school enrollment rates. As the lower panel of Table 4 shows, teenage enrollment rates in all race-sex groups increased significantly during the 1950-1970 period. Enrollment trends have a number of implications for the youth labor force. On the one hand, rising enrollment implies rising educational attainment which may reduce unemployment (Ashenfelter and Ham, 1979). On the other hand, enrollment trends may, through a number of mechanisms, increase or redistribute unemployment. We have discussed these extensively elsewhere (Mare and Winship, 1979a). In brief, enrollments may select youths who would likely have been employed were they not in school from the labor force, and leaves in the labor force less able (and less employable) youths who suffer unemployment. In addition, rising enrollments redistribute unemployment from the mid-teenage years to the twenties by delaying the average age at which youths enter the labor force. Furthermore, longer schooling prolongs the period during which youths are weakly attached to the labor force and increases their average period of unemployment. In other papers (1979a, b) we provide tentative evidence for these hypotheses for the period since 1964.

In this section we consider a more straightforward consequence of increasing school enrollments, namely a reduction in labor force participation. Because schooling is for many youths a full-time task, labor force participation rates of students are lower than those of nonstudents (for example, Fearn, 1968; Bowen and Finegan, 1969; Lerman, 1970; Gustman and Steinmeier, 1979; also see Table A2). Over time, therefore, as enrollment rates rise, labor force participation rates should decline. Over the total postwar era, the school enrollment rates of black youths have risen significantly more than those of whites. This suggests that relative increases in school enrollment for blacks may partly explain their relative deterioration in labor force participation. The relatively greater increase in enrollment for black youths, however, is largely concentrated in the 1970s when their enrollment rates continued to grow while white rates were stable. As the lower panel of Table 4 shows, for 1950-1970, white enrollment

TABLE 4

LABOR FORCE PARTICIPATION AND SCHOOL ENROLLMENT RATES, 1950-1970

	Labor Force Participation Rates			
	1950	1960	1970	Change 1950-1970*
White Males				
16-17	34.9	37.8	38.4	3.5
18-19	66.9	67.4	61.6	-5.4
20-24	82.1	86.7	81.6	- .4
25-29	91.1	94.7	93.9	2.8
Nonwhite Males				
16-17	43.6	28.4	23.6	-19.9
18-19	69.0	58.4	51.6	-17.4
20-24	80.3	81.9	75.2	-5.1
25-29	84.0	87.5	85.7	1.7
White Females				
16-17	17.8	21.8	25.0	7.2
18-19	45.4	48.1	49.1	3.7
20-24	43.4	44.9	56.3	12.9
25-29	31.4	33.3	44.0	12.6
Nonwhite Females				
16-17	16.9	13.9	15.0	-2.0
18-19	31.3	34.6	38.5	7.2
20-24	39.8	45.5	55.9	16.1
25-29	41.9	46.7	57.8	15.9

	School Enrollment Rates			
	1950	1960	1970	Change 1950-1970*
White Males				
16-17	75.6	82.4	87.1	11.5
18-19	36.2	47.6	56.6	20.4
20-24	19.2	20.5	26.5	7.3
25-29	10.6	9.5	8.9	-1.7
Nonwhite Males				
16-17	63.2	73.7	78.6	15.5
18-19	26.7	40.1	42.7	16.1
20-24	11.8	12.8	16.3	4.6
25-29	9.5	7.1	6.4	-3.1
White Females				
16-17	76.3	81.6	86.4	10.1
18-19	30.1	37.9	48.0	17.9
20-24	7.8	10.0	15.7	7.9
25-29	2.8	3.0	3.1	.3
Nonwhite Females				
16-17	65.0	73.0	78.6	13.6
18-19	25.1	36.3	40.1	15.0
20-24	6.8	9.7	12.9	6.0
25-29	2.9	4.1	3.3	.4

Source: U. S. Bureau of the Census.

* Changes may differ from differences of rates because of rounding.

rates grew at least as fast as those of blacks for all youths aged 18 and over. Nonetheless, black enrollment rates have grown faster than those of whites for 16-17 year-olds, a group for whom there has been a significant broadening of the race differential in proportions of youths holding jobs (see Tables 2 and 3). Thus for this group relative increases in black school enrollment may be a significant source of labor force change. In addition, for older age groups the approximate parity in black and white enrollment rate increases does not necessarily imply that enrollment increases fail to explain broadening race differences in labor force participation. Black youths are much less likely than whites to work while in school (Coleman, 1976; Mare and Winship, 1978; Table A2). Thus rising enrollments over the full postwar era may have a larger impact on labor force participation for black youths than for whites and consequently explain part of the relative deterioration in labor force participation of blacks.

To investigate the effects of changes in school enrollments on changes in labor force participation, we decompose the changes in labor force participation between 1950 and 1970. The top panel of Table 4 shows trends in labor force participation rates between 1950 and 1970 by age, color, and sex for 16-29 year-olds. For white males there is little change in labor force participation rates over this period. For nonwhite males, however, there are particularly large declines for teenagers. Except for 16-17 year-old nonwhites, young women show increases in labor force participation, particularly at ages 20 and over.

Changes in labor force participation rates can be regarded as the outcome of forces raising and lowering the rates. To understand the role of school enrollment changes in labor force participation changes, therefore, it is instructive to analyze the composition of positive and negative changes in participation rates. For the positive and negative changes separately, then, we calculate the proportions of change resulting from three components: (1) changes in proportions of youths who are enrolled in school, (2) changes in labor force participation rates within the categories of enrolled and not-enrolled persons, and (3) the interaction between these components. The latter two components can be further decomposed into two parts each. Changes in rates within enrollment statuses can be decomposed into changing rates for students and changing rates for nonstudents. Similarly, interaction can be separated into interaction between changing rates for students and changing proportions of youths who are students and interaction between changing rates for nonstudents and changing proportions enrolled. This results in five components of change, which are arrayed across the top of Table 5.

The upper half of Table 5 presents the components of positive changes in labor force participation rates; the lower half presents the components of negative changes. The actual changes are reported in the final column of the table. (The sum of these columns across the two panels is equal to the last column of Table 4. The elements in the interior of the table are the percentages of the positive or negative total made up by each of the five components. Thus the element in the first row of column 2 denotes that for white males aged 16-17 75 percent of the positive change in labor force participation results from increased labor force participation rates of students.)

TABLE 5

DECOMPOSITION OF CHANGE IN LABOR FORCE PARTICIPATION RATES, 1950-1970

	Enrollment (1)	Labor Force Participation Rates (Students) (2)	Labor Force Participation Rates (Nonstudents) (3)	Interaction of (1) and (2) (4)	Interaction of (1) and (3) (5)	Total
Percentages of Positive Change						
White Males						
16-17	0	75.0	0	11.4	13.7	100.0 (13.0)
18-19	0	57.9	0	32.7	9.4	100.0 (9.2)
20-24	0	71.5	0	27.2	1.2	100.0 (4.0)
25-29	17.7	49.7	32.0	0	.6	100.0 (3.1)
White Females						
16-17	0	86.4	0	11.5	2.2	100.0 (9.9)
18-19	0	34.4	45.2	20.4	0	100.0 (10.4)
20-24	0	3.9	92.2	4.0	0	100.0 (14.5)
25-29	.3	2.7	96.7	.3	0	100.0 (12.7)
Nonwhite Males						
16-17	0	0	0	0	100.0	100.0 (5.5)
18-19	0	0	0	0	100.0	100.0 (2.4)
20-24	0	50.1	0	19.5	30.4	100.0 (.7)
25-29	45.9	47.8	6.1	0	.2	100.0 (2.0)
Nonwhite Females						
16-17	0	61.8	0	12.9	25.3	100.0 (2.4)
18-19	0	21.5	65.6	12.9	0	100.0 (12.2)
20-24	0	4.4	91.8	3.9	0	100.0 (17.8)
25-29	.1	2.3	97.2	.3	0	100.0 (16.0)
Percentages of Negative Change						
White Males						
16-17	60.3	0	39.8	0	0	100.0 (-9.5)
18-19	81.4	0	18.6	0	0	100.0 (-14.5)
20-24	87.6	0	12.4	0	0	100.0 (-4.4)
25-29	0	0	0	100.0	0	100.0 (-.2)
White Females						
16-17	81.6	0	18.5	0	0	100.0 (-2.7)
18-19	82.0	0	0	0	18.0	100.0 (-6.7)
20-24	28.1	0	0	0	71.9	100.0 (-1.6)
25-29	0	0	0	0	100.0	100.0 (*)
Nonwhite Males						
16-17	31.5	13.7	51.5	3.4	0	100.0 (-25.4)
18-19	42.5	1.1	55.7	.7	0	100.0 (-19.8)
20-24	32.7	0	67.3	0	0	100.0 (-5.8)
25-29	0	0	0	100.0	0	100.0 (-.3)
Nonwhite Females						
16-17	64.4	0	35.6	0	0	100.0 (-4.3)
18-19	67.9	0	0	0	32.1	100.0 (-5.0)
20-24	36.9	0	0	0	63.1	100.0 (-1.7)
25-29	0	0	0	0	100.0	100.0 (-.1)

Source: Tables 4 and A2.

* Less than |.05|.

There have been large upward forces in labor force participation rates of whites and of nonwhite women, and large downward forces for men, especially nonwhites. The first column of the lower panel of the table shows that, except for 25-29 year-olds, changes in school enrollment are an important negative component of changes in participation rates. The significance of the enrollment component, of course, is greater for nonwhite men (and, to a lesser extent, white men) because they show the largest negative changes in labor force participation. Between 30 and 40 percent of the negative changes for nonwhite men and between 60 and 80 percent for white men can be accounted for by increases in enrollment rates. Much of the reduction in participation rates for men, however, is not explained by enrollment trends. As the third column of the lower panel shows, participation rates of men out of school have dropped, and this constitutes an especially large part of the decline for nonwhites. There are at least two possible interpretations of this result. On the one hand, the labor market conditions of persons out of school may have actually deteriorated and caused them to leave the labor force. On the other hand, among nonstudents there may be a sizable group who are very low-quality workers because of physical handicaps, low aptitude for work, or poor schooling. As enrollment rates increase, this group becomes an increasing fraction of the nonstudent population and lowers participation rates of nonstudents (Bowen and Finegan, 1969).

An important component of the increase in labor force participation rates for all teenage groups except nonwhite males is increased participation among students. This component is particularly important for young white teenagers for whom between 30 and 90 percent of the positive change in participation is a result of increased work by students. Rising labor force participation of students is not well understood, although there are several plausible interpretations. One possibility is that as enrollments increase larger proportions of youths who need to work to pay for their schooling are enrolled. Another possibility is that the consumption standards of youths have increased to the point where they need significant income from sources other than parents. Yet another interpretation is that youths are increasingly perceiving that work experience is an important supplement to educational credentials in seeking work once out of school. To our knowledge, however, none of these speculations has been examined empirically.

Finally, consistent with rising women's labor force participation throughout the population, Table 5 shows that increasing labor force participation rates of young women also result from increasing rates among nonstudents.

To summarize, the analysis reported in this section shows that rising school enrollment has been a particularly important source of declines in labor force participation, especially for nonwhite teenage males. Among whites (and, to a lesser extent, nonwhite women), however, secular increases in school enrollment have been accompanied by rising labor force participation rates of students, resulting in stable participation rates overall. Because young nonwhite men have not shown the accompanying rise in student participation rates, they have suffered a net loss in labor force participation. School enrollment trends, then, have reduced the relative labor force participation of black youths through two reinforcing mechanisms. More black youths are now students, lowering

their participation rates. And black youths have a greater participation differential between students and nonstudents than whites, implying that enrollment trends have a bigger impact on their participation. The analysis for men also shows, however, that for nonwhites labor force participation rates of nonstudents have also declined. This part of the overall change must be explained by other means.

B. Unemployment and Changes in Occupational Structure

There have been considerable changes in the occupational distributions of employed persons during the post-World War II era. There has been a shift from manual to nonmanual employment, highlighted by declines in farm workers and substantial increases in professionals and service workers (U.S. Bureau of the Census, 1975, p. 139). Historically, black and white workers have been unequally distributed across occupational groups. Blacks have typically been overrepresented relative to whites in manual and low-skilled nonmanual jobs. This suggests that a possible source of unemployment trends is shifts in occupational distributions which differentially affect blacks and whites. For youths, one important shift that may have affected unemployment is the decline in agricultural employment. Farm work has historically been a major source of employment for youths—especially teenagers—and the secular decline in farm employment for blacks has lagged that of whites. During the 1950-1970 era, therefore, black youths may have been disproportionately affected by the continued secular decline in agricultural employment.

Elsewhere we have discussed the causes and possible consequences for racial youth unemployment differences of trends in occupational distributions, and particularly the decline in agricultural employment (Mare and Winship, 1979a). Here it suffices to briefly make two points. First, the decline in farm employment appears to have resulted from forces in farm consolidation and mechanization which reduced the labor intensiveness of agriculture. Thus, youths involuntarily lost a major source of employment; they did not voluntarily leave agriculture. Second, declines in agricultural employment may have had a particularly strong impact on youth unemployment because, despite considerable job growth, there was insufficient compensating growth in low-skill nonagricultural jobs. If enough low-skill jobs were not created, unemployment would increase for youths with low-quality schooling and limited work experience as agricultural employment dwindled. These arguments are developed in more detail in our earlier paper (1979a) and rest on earlier analyses by Fisher (1973) and others.

In this section we discuss trends in the occupational distributions of youths between 1950 and 1970. We describe race-specific trends and apportion the trends in the race differential in youth unemployment to components resulting from occupation-specific changes. This analysis casts light upon the significance of change in agricultural employment as well as other occupational changes. It is not a test of the argument that changes in the job composition of the economy have caused trends in unemployment. This would require an elaborate model of supply and demand, which we have not attempted. But the analysis suggests possible sources of unemployment trends and thus bears upon the argument sketched above.

Between 1950 and 1970 there were substantial changes in the occupational distributions of employed youths. Table 6 presents the percentages of employed youths in each major occupational category by color, sex, and age for 1950 and 1970.4/ In 1950 the category farm worker was the largest occupational group for young men and one of the largest for nonwhite women. For example, 39.2 percent of nonwhite males 18-19 were farm workers in 1950, whereas by 1970 the percentage had declined to 4.5 percent. By 1970, therefore, agriculture was a relatively unimportant source of youth employment. A second important occupational change between 1950 and 1970 is the decline in the proportion of nonwhite young women who are private household workers. This was their most important source of employment in 1950, and the proportion employed in this group declines by approximately 80 percent over the 20 years. These declines were offset by growth in other occupations. There were significant increases in percentages employed as service workers for all teenagers, as clerical workers for nonwhite women, and as professional and technical workers for persons in their twenties.

These changes in occupational distributions suggest that shifts in the economy may have differentially affected employment sources of black and white youths. These differentials are shown more clearly in Table 7 which reports the difference between the growth rates of blacks and whites in each occupational group.5/ Positive entries denote that employment in an occupation grew faster or declined slower for blacks than for whites. Negative entries denote the opposite. There is a clear pattern of differential growth. Black employment has grown faster than white employment in white-collar and skilled blue-collar occupations and has grown more slowly (or declined more rapidly) in low-skill occupations. This pattern is consistent with well-known trends of occupational upgrading of black workers relative to whites and of convergence in their relative wage levels.

To understand the implications of these differential rates of growth for race differentials in unemployment would, as noted, require a full analysis of supply and demand within occupation-specific labor markets. This would enable one to determine whether, in fact, unemployment for black youths has grown because declining manual and agricultural employment opportunities were not offset by job growth elsewhere. Nonetheless it is possible to ask: <u>given</u> the observed broadening unemployment differential between 1950 and 1970, how have gains and losses in relative numbers of whites and blacks who are employed been allocated among occupations. By decomposing changes in the racial unemployment differential associated with each occupation, it is possible to determine where occupational structural changes <u>may</u> have induced changes in the differential.

4/ The 1970 occupational data classify individuals as black or nonblack whereas the 1950 data classify them as white or nonwhite. Published tables with a consistent race classification for the two years were unavailable. We have made no adjustment for this discrepancy, and in reporting analyses of these data we use the terms "white" and "black" since it is the black-white differentials that are of interest.

5/ The rates of growth (and decline) are reported in Table A3.

TABLE 6

PERCENTAGE OF EMPLOYED YOUTHS IN MAJOR OCCUPATIONAL CATEGORIES, 1950 AND 1970

	Profes. & Tech.	Managers	Clerical	Sales	Crafts	Operatives	Private Household	Service	Farm Workers	Laborers	Total
1950											
White Males											
16-17	.5	.6	5.7	12.7	3.9	17.4	.2	9.5	36.2	13.3	100.0
18-19	2.4	1.3	10.5	8.5	8.9	27.5	.1	5.1	21.9	14.0	100.0
20-24	6.1	3.7	10.2	7.7	16.2	29.0	.1	3.7	13.4	10.1	100.0
25-29	10.4	7.4	8.3	8.0	20.3	24.5	*	3.6	10.9	6.5	100.0
White Females											
16-17	2.2	.4	20.2	25.1	.5	14.3	13.0	17.3	6.0	1.1	100.0
18-19	7.2	.5	48.8	12.0	.7	15.3	3.4	9.9	1.6	.7	100.0
20-24	13.6	1.3	48.9	7.2	1.2	16.8	1.5	7.7	1.3	.6	100.0
25-29	14.0	2.6	39.6	7.4	1.6	21.4	1.5	9.1	2.1	.7	100.0
Nonwhite Males											
16-17	.2	.2	.9	1.7	1.4	10.9	.7	12.6	57.7	13.7	100.0
18-19	.4	.4	2.4	1.7	3.4	17.2	.7	13.6	39.2	21.0	100.0
20-24	1.3	.8	3.9	1.5	5.9	23.9	.5	12.9	24.1	25.2	100.0
25-29	2.7	1.5	4.9	1.3	8.1	26.1	.6	11.8	18.8	24.2	100.0
Nonwhite Females											
16-17	.4	.1	.2	1.3	.3	7.1	38.4	14.3	36.7	1.2	100.0
18-19	2.8	.4	6.2	2.2	.4	15.1	34.0	18.9	18.4	1.7	100.0
20-24	6.3	.6	9.2	1.7	.8	18.1	32.4	19.8	9.6	1.4	100.0
25-29	7.7	.8	7.4	1.7	.1	19.0	33.6	21.2	7.2	1.5	100.0
1970											
Nonblack Males											
16-17	1.7	.8	7.7	9.7	5.7	18.4	.2	24.2	7.4	24.3	100.0
18-19	4.3	1.6	11.3	7.0	12.7	26.7	.1	13.6	4.6	18.0	100.0
20-24	15.4	5.2	11.2	6.6	19.1	23.2	*	7.6	2.9	8.6	100.0
25-29	21.5	9.1	7.7	7.3	22.0	19.6	*	5.5	2.6	4.8	100.0
Nonblack Females											
16-17	2.3	.3	30.8	18.1	.7	5.9	7.1	31.7	1.3	1.8	100.0
18-19	4.2	.7	51.4	10.7	1.0	9.2	1.9	19.3	.6	1.1	100.0
20-24	18.7	1.7	47.6	5.3	1.2	9.8	1.0	13.7	.3	.8	100.0
25-29	25.4	2.7	37.7	4.7	1.6	12.9	1.1	12.6	.5	.8	100.0
Black Males											
16-17	2.0	.6	9.8	4.6	5.3	14.8	.7	33.5	6.9	21.8	100.0
18-19	3.1	.7	13.1	3.7	9.7	26.7	.1	19.7	4.5	18.7	100.0
20-24	6.4	1.8	12.1	2.6	13.0	32.5	.2	12.6	3.6	15.3	100.0
25-29	8.1	2.9	9.6	2.6	16.0	33.4	.2	11.3	2.8	13.2	100.0
Black Females											
16-17	4.5	.2	38.2	6.9	.5	8.2	7.4	29.1	2.2	2.8	100.0
18-19	4.0	.4	47.8	5.2	.8	15.0	4.3	19.6	1.1	1.8	100.0
20-24	10.2	.7	39.3	3.1	1.4	18.0	5.6	19.1	1.0	1.6	100.0
25-29	14.9	1.0	27.0	2.3	1.7	20.5	7.9	22.2	1.2	1.3	100.0

Source: U. S. Bureau of the Census.

* Less than .05.

TABLE 7

DIFFERENCE BETWEEN BLACK AND WHITE OCCUPATIONAL GROWTH RATES

	Profes. & Tech.	Managers	Clerical	Sales	Crafts	Operatives	Private Household	Service	Farm Workers	Laborers
Males										
16-17	1.9	0.4	7.3	0.9	0.4	1.0	-2.1	-2.9	-0.3	-1.4
18-19	7.5	0.2	4.9	1.3	1.2	0.3	-1.9	-2.5	-0.2	-1.0
20-24	2.5	1.0	2.3	1.0	1.1	0.6	-0.5	-1.4	-0.1	-0.4
25-29	0.9	0.6	1.1	1.2	0.9	0.5	-0.1	-0.7	-0.1	-0.2
Females										
16-17	12.8	1.3	280.5	6.0	-0.6	0.6	-1.1	-1.7	-0.5	-0.9
18-19	1.9	0.1	14.0	3.4	1.3	1.1	-0.7	-1.3	-0.3	-0.7
20-24	0.7	0.1	6.5	2.3	1.5	0.8	-0.8	-1.3	-0.3	-0.2
25-29	0.2	0.3	4.1	1.1	32.9	0.7	-0.7	-0.5	-0.2	-0.3

Source: Table A3.

We first decompose changes in the unemployment rate into changes in employment shares of each occupation. If, for each age-race-sex group, in the t^{th} year, U_t is the unemployment rate, E_t the number of employed persons, and L_t the size of the labor force, $U_t = 1 - (E_t/L_t)$. Denote the number of persons employed in the i^{th} occupation in the t^{th} year by E_{it}. Then $U_{t+1} - U_t = -\sum_i (E_{it+1}/L_{t+1} - E_{it}/L_t)$. That is, changes in the proportion of the population unemployed is minus the sum of changes in the proportion employed in each occupation. If the percentage of the labor force employed in each period is the same for an occupation, then the component of change in unemployment associated with it will be zero; if the percentage in the occupation increases, the component will be negative indicating that it accounts for a reduction in unemployment; if the percentage decreases, the component will be positive indicating that it accounts for an increase in unemployment.

We extend the decomposition of change to examine change in the black-white unemployment differential. If we add to the variables defined above the subscripts w and b to denote white and black respectively, then the white-black unemployment differential in year t is $D_t = U_{wt} - U_{bt}$ and, using the formula given above, the change in the differential between years is

$$D_{t+1} - D_t = \sum_i \{[(E_{bit+1}/L_{bit+1}) - (E_{wit+1}/L_{wit+1})] - [(E_{bit}/L_{bit}) - (E_{wit}/L_{wit})]\}.$$

Hence the change in the differential has a component for each occupation i. 6/

Table 8 shows the occupational decomposition of change in the black-white employment differential between 1950 and 1970. The final column of the first panel presents the changes in the race differential between the two years. Consistent with our earlier discussion of unemployment trends since 1954, these rates show significant broadening of the unemployment differential for teenagers. 7/ The interior of the table presents the components of change in employment differentials, which are negative for those occupations contributing to a deterioration in the relative employment status of blacks. The calculations show particularly large relative employment declines associated with the decline in farm workers for teenagers of both sexes and with the decline in private household workers for all black women. Both sets of changes are several times the sizes of the actual relative employment change, suggesting that in the absence of offsetting growth in other job sectors, the unemployment differential would have broadened much more than it did.

6/ These components can be further allocated into (1) initial race differentials in occupational distributions, (2) race differences in occupational growth rates, and (3) interaction. This latter decomposition, however, is not reported here. Rather we report the components represented by the above formula.

7/ The unemployment rates from which these change estimates are calculated are presented in Table A4.

TABLE 8

OCCUPATIONAL COMPONENTS OF CHANGES IN RACIAL EMPLOYMENT DIFFERENTIALS, 1950-1970

	Profes. & Tech.	Managers	Clerical	Sales	Crafts	Operatives	Private Household	Service	Farm Workers	Laborers	Total**	
Changes												
Males												
16-17	.4	.2	5.3	4.7	1.4	1.3	-.1	2.8	-20.4	-4.3	-8.7	
18-19	.4	-.1	8.0	2.8	1.6	7.6	-.5	-3.1	-14.8	-6.5	-4.6	
20-24	-4.3	-.5	6.2	1.9	3.5	12.9	-.3	-3.9	-8.6	-7.5	-0.6	
25-29	-5.8	-.4	5.1	1.9	5.9	12.3	-.3	-2.0	-6.6	-7.9	2.2	
Females												
16-17	2.9	.1	19.0	10.1	*	7.5	-20.8	-2.6	-24.4	.5	-7.7	
18-19	3.6	-.1	31.5	3.7	*	5.2	-23.5	-8.4	-13.4	-.4	-1.8	
20-24	-1.2	-.2	28.3	3.2	.5	6.6	-23.1	-6.2	-6.7	*	1.2	
25-29	-3.9	.1	20.4	3.2	1.5	9.8	-22.8	-2.0	-3.9	-.2	2.2	
Percentages of Total Positive Change												
Males												
16-17	2.4	1.2	32.8	29.4	8.8	8.0	0	17.4	0	0	100.0	(16.1)
18-19	2.1	0	39.3	13.6	7.6	37.4	0	0	0	0	100.0	(20.3)
20-24	0	0	25.4	7.7	14.2	52.7	0	0	0	0	100.0	(24.4)
25-29	0	0	20.4	7.6	23.3	48.7	0	0	0	0	100.0	(25.0)
Females												
16-17	7.2	.4	47.3	25.1	0	18.8	0	0	0	1.1	100.0	(40.1)
18-19	8.2	0	71.5	8.5	.1	11.8	0	0	0	0	100.0	(44.1)
20-24	0	0	73.3	8.3	1.2	17.2	0	0	0	0	100.0	(38.6)
25-29	0	.3	58.2	9.2	4.2	28.1	0	0	0	0	100.0	(35.0)
Percentages of Total Negative Change												
Males												
16-17	0	0	0	0	0	0	-.5	0	-82.1	-17.3	100.0	(-24.9)
18-19	0	-.3	0	0	0	0	-2.2	-12.5	-59.1	-25.9	100.0	(-25.1)
20-24	-17.1	-1.9	0	0	0	0	-1.2	-15.5	-34.3	-30.0	100.0	(-25.0)
25-29	-25.1	-1.9	0	0	0	0	-1.4	-8.6	-28.7	-34.3	100.0	(-23.1)
Females												
16-17	0	0	0	0	*	0	-43.5	-5.5	-51.0	0	100.0	(-47.8)
18-19	0	-.2	0	0	0	0	-51.3	-18.4	-29.3	-.8	100.0	(-45.8)
20-24	-3.2	-.5	0	0	0	0	-61.7	-16.6	-17.9	*	100.0	(-37.4)
25-29	-12.0	0	0	0	0	0	-69.3	-6.2	-12.0	-.5	100.0	(-32.9)

Source: U. S. Bureau of the Census.

* Less than |.05|.

** Percentages may not add to total because of rounding.

The second and third panels of Table 8 present the components of change in the racial unemployment differential. As in our decomposition of change resulting from enrollment trends, we have split the net change into positive and negative changes in the differential and expressed each component as a percentage of the total positive or negative change. The totals in the last columns of the second and third panels sum to the total net changes in the last column of the first panel. The first entry in the second panel, for example, indicates that for 16-17 year-old males 2.4 percent of the total positive change (that is, improvement in the relative employment position of black youths) was made up by relatively greater growth in professional and technical employment for blacks. The totals of the first rows of the second and third panels show, however, that on balance the negative changes outweigh the positive and thus the components of negative change have a bigger impact than the components of positive change.

Partially offsetting the negative effects of declines in farm and private household employment are increases in the relative numbers of young blacks in white-collar and relatively skilled blue-collar occupations. The middle panel of Table 8 shows that for young men the important changes are relative increases in clerical, sales, craft, and operative employment. For women relative increases in clerical, operative, and, for teenagers, professional and sales employment have been salient. The stable relative employment status of black men in their twenties between 1950 and 1970 evidently results from strong growth in relative numbers of young black men in more highly skilled blue-collar occupations that was enjoyed only to a lesser extent by black teenagers. For young women, by contrast, the employment deterioration is completely concentrated among 16-17 year-olds and can be accounted for by unusually strong relative declines in farm employment on the one hand and relative increases in clerical employment that were not as large as those enjoyed by older black women.

The calculations reported in this section strongly suggest that a major source of relative employment change for black teenagers has been a reduction in historically high employment in the lowest-skilled occupations in the economy. Employment in many better-skilled jobs has grown relatively faster for blacks than for whites, but for teenagers this does not offset the employment losses. These results suggest that there continues to be a large supply of unskilled labor in the black teenage population, which in the past found low-skill employment on farms and in private households. Long-run economic changes have eliminated these employment opportunities and failed to replace them with others.

V. SOURCES OF CHANGE: 1968-1978

This section considers possible sources of change in labor force participation and unemployment rates of youths between 1968 and 1978.8/ Our earlier discussion showed that during 1968-78 the deterioration in the relative labor force standing of blacks spread from teenagers to

---

8/ The analysis reported in this section for labor force and unemployment rates was also carried out for employment ratios, that is, the ratio of employed persons to the civilian population. The results were very similar to those reported here for labor force participation rates and thus are not discussed here.

young adults in their twenties. Exploiting microdata from the March Current Population Surveys for this period, we examine the effects of several possible social and demographic changes on labor force trends in addition to trends in school enrollment and occupational structure that we considered for 1950-1970. Apart from enrollment and occupational trends, we consider trends in family status, marital status, welfare recipiency, and educational attainment. The first part of this section reports the components of change in unemployment and labor force participation resulting from the latter four factors as well as school enrollment trends. The second part reports an analysis of occupational trends paralleling that reported for 1950-1970.

A. Social and Demographic Factors

The social and demographic factors considered in this section were selected because either previous speculation or preliminary inspection of the data indicated that they were associated with labor force standing and had changed significantly. In this section we briefly outline the possible effects of the factors that we consider. Fuller discussion is provided in our earlier paper (1979a).

The negative effect of school enrollment on increases in labor force participation has been discussed in earlier sections. The period 1968-1978 witnessed continuation of the upward enrollment trend for black youths, but not for whites. The third panel of Table 9 reports enrollment trends between the years 1968-1970 and 1976-1978. (In these and all other tables in this section, we report data for these two three-year groupings. This is the longest period that we can span with the CPS and affords greater stability in our estimates than would be provided by single year data.) The tables show continued upward enrollment for blacks and apparently strong declines for nonblacks. We believe, however, that this decline is largely artifactual. As noted above, the 1968-1970 period was the height of the Vietnam War. Since the CPS excludes the armed forces, the enrollment proportions were artificially inflated by a reduced civilian population during these years. This accounts for much of the apparent decline for nonblack males.9/ A second source of the observed enrollment decline is the way that school enrollment is measured. We rely for these tabulations on responses to a question about their "major activity last week," because no direct enrollment question is asked in the March CPS. This question underestimates the proportion of the population enrolled in school.10/ As labor force participation rates of nonblack students have risen, their likelihood of reporting other major activities than schooling while still enrolled has increased. On balance, therefore, black enrollments have continued to rise, whereas nonblack enrollments are probably stable. Taken together, these trends should account for further widening in the differential labor force participation rates of black and white youths.

9/ It also implies a slight downward bias in the enrollment upswing for black males during this period.

10/ For recent October CPS's, in which both the "major activity" and a direct enrollment status question are asked, the former yields an estimate of enrollment approximately 17 percent lower than the latter.

TABLE 9

TRENDS IN SELECTED SOCIAL CHARACTERISTICS, 1968-1978

		Males				Females			
		Nonblack		Black		Nonblack		Black	
	Age	68-70	76-78	68-70	76-78	68-70	76-78	68-70	76-78
Percentage Married with Spouse Present	16-17	0.5	0.5	0.3	*	3.9	4.2	3.5	2.3
	18-19	7.1	6.2	4.1	2.2	20.0	18.7	18.7	9.2
	20-24	43.4	33.8	41.9	23.6	58.4	50.1	41.8	26.1
	25-29	79.1	68.7	70.4	48.4	82.7	74.1	58.6	45.4
Percentage Living in "Own" Household	16-17	1.4	1.4	2.1	0.8	4.0	5.2	4.3	3.8
	18-19	9.3	11.9	5.2	5.0	23.7	26.3	18.7	17.2
	20-24	50.1	47.6	46.6	38.1	67.4	68.2	55.8	56.7
	25-29	86.5	86.2	77.0	77.2	91.7	92.2	83.7	82.6
Percentage Enrolled in School	16-17	88.1	82.7	81.5	85.8	88.1	81.4	81.7	84.3
	18-19	61.0	45.5	50.4	54.1	47.3	41.6	39.8	49.7
	20-24	27.0	18.6	14.0	17.0	12.7	13.7	9.3	15.2
	25-29	4.3	4.2	2.1	4.1	1.1	2.1	0.9	2.6
Percentage Receiving Public Assistance	16-17	0.2	0.2	1.3	1.7	0.2	0.8	1.7	3.7
	18-19	0.4	0.6	0.4	1.5	0.6	2.7	5.1	13.4
	20-24	0.7	1.2	1.3	2.0	1.7	4.4	9.8	24.6
	25-29	0.9	1.3	1.4	2.5	1.8	4.7	14.1	22.5
Percentage with Some College	16-17	0.2	0.3	*	0.3	0.3	0.2	0.5	0.1
	18-19	14.4	11.2	6.1	7.5	13.1	13.4	8.7	12.8
	20-24	44.6	42.0	21.1	29.8	34.0	38.5	21.4	29.9
	25-29	37.0	51.3	16.3	34.2	27.0	40.7	15.1	29.6
Percentage with High School Diploma	16-17	0.1	0.2	1.4	1.0	1.5	3.0	2.4	2.8
	18-19	43.9	48.5	29.8	28.5	54.3	53.7	37.3	41.7
	20-24	37.2	42.1	35.3	42.6	46.9	45.9	42.0	44.3
	25-29	40.1	35.0	41.7	41.7	49.2	43.7	38.5	44.5

Source: March Current Population Survey.

* Less than .05.

Elsewhere we have outlined the possible effects of trends in marital status on employment trends, suggesting that declining proportions of male youths who are married may account for some labor force deterioration, inasmuch as unmarried youths have less incentive to maintain stable employment (Mare and Winship, 1979a). For women, by contrast, the linkage between marriage and labor force status implies no straightforward effect of marriage trends on labor force trends.

Obviously, the relationship between marital and labor force status is complex, since marital decisions are often affected by economic welfare. In cross-sectional surveys such as the CPS, this relationship cannot be explored. Nonetheless, it may be plausible to assume that one's current marital status may be affected by one's past labor market experiences, and that one's current marital status affects one's current employment status. If this model were correct, then we could estimate marital status effects on labor force status with the CPS. Since these relationships are poorly understood, we do not claim that such a model is the correct one. Still, it is a plausible first-order approximation that permits preliminary investigation of the extent to which changes in marital status explain trends in labor force behavior.

The first panel of Table 9 presents proportions of youths who are married with their spouse present in their household. For all age-race-sex groups this proportion declines over the decade, but the change is especially dramatic for black youths. Given the positive association between marriage and employment for men, these trends may affect unemployment and labor force trends.

A third social factor that we consider is household status. Young men who have established their place of residence apart from that of their parents have greater incentive to obtain work to support themselves. For women, by contrast, the bivariate relationship is again ambiguous inasmuch as living apart from parents often implies economic dependence on spouses. For simplicity we have classified CPS respondents by whether they live in their "own" households or those of someone else. Household heads, spouses of heads, and primary individuals constitute the former group. The latter group comprises all other persons, but is mainly youths living at home with their parents. Trends in the proportions of youths who have established their "own" households are reported in the second panel of Table 9. Overall changes from 1968 to 1978 are small, but one exception is the eight percentage point decline for black males aged 20 to 24. Since this group experiences considerable labor market deterioration over this period, the trend in living arrangements may be an important source of change.

A further possible source of labor force trends for some groups may be the trend in recipiency of public assistance. Although previous research has not found clear effects of welfare recipiency on employment status, there has been little attempt to examine this relationship over a lengthy period of time with individual-level data. Moreover, preliminary inspection of the CPS data suggested that the association between public assistance recipiency and labor force standing might be quite strong. The fourth panel of Table 9 reports the proportions of youths receiving any public assistance during the year prior to the survey date. In the CPS public assistance for youths consists primarily of Aid to Families with Dependent Children and assistance to the disabled. For men, there is

only slight change over the decade. For women, by contrast, there are strong upward trends in recipiency. For black women, the increases in recipiency are dramatic, ranging from 8 to 14 percentage points for the three oldest age groups.

There are, of course, a number of reasons to be cautious in interpreting the effects of changes in welfare recipiency. Although the recipiency measures pertain to the year prior to the time that labor force standing is measured, receiving public assistance may nonetheless depend upon labor force standing at an earlier period, which may be correlated with labor force standing in the survey week. Moreover, the familial and economic circumstances determining welfare dependency are highly complex. For simplicity and because of limited information on the CPS files, we have not attempted to control for household characteristics affecting welfare recipiency. A full analysis needs to take account of family factors, including the presence of children and overall family economic standing. Nonetheless, the analysis presented here is useful inasmuch as it begins to document the temporal relationship between welfare recipiency and labor force trends.

Finally, we consider trends in educational attainment for youths. Prior research finds a positive association between formal school qualifications and employment. As the final two panels of Table 9 show, there has been considerable improvement in the educational standing of blacks and nonblacks over the past decade. To the extent that the labor force standing of blacks has deteriorated over time, this is despite a salutary educational trend. This suggests that blacks' labor force trends might have been worse in the absence of their rising educational status.

B. Decomposition of Change

To determine the importance of the trends discussed above, we calculate a multivariate decomposition of change between 1968-1970 and 1976-1978 in labor force participation and unemployment rates and their race differentials for the 16-29 year-old population. The purpose of the decomposition is to suggest the orders of magnitude of effects of selected social changes on labor force trends. As we have noted, the causal relationships between labor force indicators and some of the social trends--especially in marital status, welfare recipiency, and family relationships--are often ambiguous. The proposed calculations assume that the latter trends affect changes in the labor force rather than vice versa. We have sketched the mechanisms through which the assumed causal relationships may operate. Nonetheless, we believe that a fuller treatment of these relationships using panel data that more fully elucidate the timing of events is in order.

The decompositions reported in this section rest on logit models of the effects of social and demographic factors on unemployment and labor force participation rates. (It parallels a standard regression-based decomposition of differences, for example, Duncan, 1968; Winsborough and Dickinson, 1971.) The estimated parameters of the models are used to decompose the change in the logits of the labor force rates into components for changes in: (1) social factors, (2) labor force rates within the categories of measured social factors, (3) the role of unmeasured factors, and (4) interaction. We report below changes in

TABLE 10

COMPONENTS OF CHANGE IN LABOR FORCE PARTICIPATION RATE, 1968-70--1976-78

	16-17 Year Olds						18-19 Year Olds					
	Male			Female			Male			Female		
	Nonblack	Black	Difference	Nonblack	Black	Difference	Nonblack	Black	Difference	Nonblack	Black	Difference
Population Composition												
Married Spouse Present	.2	2.6	1.8	-.8	3.9	-1.9	-.8	8.6	3.7	4.5	-185.3	-12.8
Own Family	*	-.5	.3	-.1	.2	-.2	6.6	.4	3.6	-.9	11.7	.3
Public Assistance Recipiency	.3	5.0	3.5	-1.2	7.5	-3.2	-.7	.7	*	-8.9	147.5	5.4
Enrolled	60.3	21.4	34.2	16.9	-45.9	31.5	100.6	28.5	65.6	28.3	403.6	62.6
Education	-.5	-.2	-.3	1.3	-3.3	2.3	.1	3.3	1.6	-.3	-162.2	-15.0
Specific Rates												
Married Spouse Present	-5.1	3.2	.5	-1.7	-23.0	3.2	7.5	10.3	8.8	-5.6	-22.6	-7.2
Own Family	-5.9	-8.4	-7.5	-.8	22.9	-6.0	-12.5	16.3	1.4	-.1	-111.2	-10.2
Public Assistance Recipiency	1.7	-13.7	-8.6	-.3	-12.2	2.5	.5	.2	.4	.2	38.6	3.7
Enrolled	-130.2	80.2	11.0	-57.4	13.9	-74.1	-31.8	-43.3	-37.3	-27.3	113.2	-14.4
Education	1.7	2.0	1.9	.8	-12.2	3.9	18.0	-45.5	-12.6	6.2	453.8	47.1
Constant	169.9	7.0	60.6	140.0	151.7	137.3	8.5	131.9	68.0	99.3	-712.2	25.2
Interaction	7.6	1.4	3.4	3.2	-3.3	4.8	3.9	-11.5	-3.5	4.4	-125.1	15.4
Total Change	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Logit Scale	.145	-.296	.442	.436	.083	.354	.366	-.394	.710	.392	-.039	.432

TABLE 10 (continued)

	20-24 Year Olds						25-29 Year Olds					
	Male			Female			Male			Female		
	Nonblack	Black	Difference	Nonblack	Black	Difference	Nonblack	Black	Difference	Nonblack	Black	Difference
Population Composition												
Married Spouse Present	-11.8	42.7	16.3	25.6	107.7	3.4	15.1	22.0	26.1	20.9	20.9	20.9
Own Family	4.0	18.5	11.5	-.5	1.3	-1.0	1.1	-.2	-1.0	*	-.1	.3
Public Assistance Recipiency	-2.8	6.0	1.7	12.8	-205.6	39.2	2.7	3.2	3.5	-8.2	-33.4	24.8
Enrolled	77.2	23.8	49.6	-5.4	-185.3	43.2	-.6	9.0	14.8	-2.4	-12.9	11.3
Education	4.5	-13.8	-4.9	11.0	139.9	-23.8	.3	-3.2	-5.3	7.2	41.0	-37.1
Specific Rates												
Married Spouse Present	23.0	67.5	46.0	-10.0	-29.6	-4.7	-37.3	47.3	98.1	1.8	-4.8	10.3
Own Family	-8.5	-15.3	-12.0	34.4	106.9	14.8	127.9	13.7	-55.0	2.2	72.4	-89.7
Public Assistance Recipiency	1.8	-9.3	-3.9	1.1	-46.2	13.8	-1.5	-2.5	-3.1	.7	-1.8	4.0
Enrolled	-29.4	19.3	-4.3	-13.5	35.5	-26.7	.5	-.4	-.9	-.8	.2	-2.1
Education	160.3	4.0	79.6	17.6	-145.7	61.6	-66.5	-23.2	2.8	49.1	13.6	95.5
Constant	-117.0	-16.1	-64.9	47.1	375.6	-41.5	82.2	62.3	50.3	18.4	1.1	41.1
Interaction	-1.2	-27.3	-14.7	5.4	-54.6	21.6	-24.0	-28.0	-30.3	11.2	4.0	20.5
Total Change	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Logit Scale	.314	-.335	.648	.390	.083	.307	-.297	-.791	.494	.680	.385	.295

Source: March Current Population Survey.

* Less than |.05|.

TABLE 11

COMPONENTS OF CHANGE IN UNEMPLOYMENT RATE, 1968-70--1976-78

	16-17 Year Olds						18-19 Year Olds					
	Male			Female			Male			Female		
	Nonblack	Black	Difference	Nonblack	Black	Difference	Nonblack	Black	Difference	Nonblack	Black	Differen
Population Composition												
Married Spouse Present	*	.8	1.3	.5	4.7	25.7	1.4	6.6	16.6	.2	.2	.1
Own Family	2.1	-.2	-1.8	1.0	*	-4.6	-1.7	.2	3.7	-.5	-.1	.9
Public Assistance Recipiency	.3	3.6	5.9	-.8	4.0	27.9	.9	.5	-.2	3.2	7.7	18.9
Enrolled	-2.4	.6	2.7	1.4	-2.1	-19.4	3.6	1.1	-3.8	.6	5.0	15.9
Education	-1.4	2.2	4.6	-3.8	-.8	13.8	-6.1	1.5	16.1	3.3	-4.9	-25.3
Specific Rates												
Married Spouse Present	*	1.9	3.2	-.7	25.4	155.1	-.9	11.6	35.7	1.1	1.7	3.2
Own Family	6.7	1.6	-2.0	1.0	2.3	9.0	7.1	-5.3	-29.0	5.5	.5	-12.0
Public Assistance Recipiency	*	-.2	-.3	.7	3.7	18.4	*	.2	.6	.1	.7	2.1
Enrolled	70.9	35.3	10.7	83.3	134.0	385.8	19.3	-1.6	-41.8	17.4	-.8	-46.7
Education	2.4	3.9	4.9	.4	-3.4	-22.1	6.1	-14.0	-52.6	26.5	10.9	-28.4
Constant	31.2	55.2	71.7	26.4	-73.4	-569.0	74.0	106.7	169.6	42.6	76.6	162.2
Interaction	-9.9	-4.6	-1.0	-9.3	5.6	79.4	-3.7	-7.5	-14.9	-.1	2.6	9.4
Total Change	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Logit Scale	.419	1.025	-.606	.382	.458	-.077	.590	.895	-.306	.501	.700	-.199

TABLE 11 (continued)

	20-24 Year Olds						25-29 Year Olds					
	Male			Female			Male			Female		
	Nonblack	Black	Difference	Nonblack	Black	Difference	Nonblack	Black	Difference	Nonblack	Black	Diffe
Population Composition												
Married Spouse Present	6.3	.3	-7.9	-3.1	-3.6	-1.2	4.7	15.3	-34.6	-4.1	-4.8	-5
Own Family	.1	7.8	18.3	-1.3	-2.7	3.7	.4	-.5	3.9	-3.2	.6	6
Public Assistance Recipiency	1.3	2.0	2.9	2.7	22.1	-65.4	.6	1.4	-2.1	4.6	8.9	15
Enrolled	-2.9	*	3.9	.2	6.1	-20.5	-.5	2.5	-11.5	1.6	2.8	4
Education	-4.1	-6.8	-10.5	-5.0	-21.4	52.4	-17.1	-16.8	-18.4	-43.0	-16.8	22
Specific Rates												
Married Spouse Present	-2.1	-13.7	-29.5	-13.3	-6.7	-36.5	-8.6	30.5	-153.6	-14.3	-11.2	-6
Own Family	35.4	14.9	-12.9	-15.0	13.0	-173.2	43.5	6.1	182.3	-8.4	-78.6	-185
Public Assistance Recipiency	*	-.1	-.4	.3	1.6	-4.4	*	.3	-1.0	.5	12.4	30
Enrolled	4.2	6.5	9.8	-1.5	1.0	-10.0	-.1	-.7	2.4	-.6	-.8	-1
Education	-14.9	3.5	28.4	26.2	67.1	-117.5	3.0	3.1	2.6	73.8	-7.6	-131
Constant	78.1	84.3	92.7	107.8	6.4	464.0	71.6	65.9	93.0	74.1	185.9	355
Interaction	-1.5	1.3	5.1	1.9	17.1	-51.3	2.4	-6.9	36.8	19.1	9.2	-6
Total Change	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100
Logit Scale	.684	1.187	-.504	.652	.508	.145	.967	.761	.205	.422	.700	-.2

TABLE 12

PERCENTAGE OF EMPLOYED YOUTHS IN MAJOR OCCUPATIONAL CATEGORIES, 1968-70 AND 1976-78

Age	Years	Profes. & Tech.	Managers	Clerical	Sales	Crafts	Operatives	Private Household	Service	Farm Workers	Laborers	Total
Nonblack Males												
16-17	1968-70	2.1	.3	7.0	9.6	3.7	19.2	.7	20.7	12.7	24.0	100.0
	1976-78	1.2	.6	4.4	7.1	4.4	14.0	.6	30.9	12.1	24.8	100.0
18-19	1968-70	4.3	1.6	10.9	7.4	9.4	30.6	.2	11.4	6.0	18.3	100.0
	1976-78	2.8	2.3	7.1	5.6	13.5	23.6	.1	18.2	6.8	20.1	100.0
20-24	1968-70	14.3	5.1	11.5	6.3	16.3	27.4	.1	6.6	3.3	9.3	100.0
	1976-78	10.5	6.0	7.9	5.7	20.6	23.4	.1	9.8	3.5	12.6	100.0
25-29	1968-70	21.2	10.8	7.4	6.1	20.1	22.2	*	4.5	2.9	4.8	100.0
	1976-78	19.7	12.1	6.3	6.3	22.2	17.8	*	6.7	3.0	5.8	100.0
Black Males												
16-17	1968-70	2.6	.3	8.7	4.9	2.6	15.0	.3	28.6	11.0	26.0	100.0
	1976-78	1.0	.3	2.7	2.7	3.0	6.0	1.0	48.0	3.6	31.8	100.0
18-19	1968-70	2.8	.4	11.9	1.9	3.4	30.1	*	18.0	7.0	24.4	100.0
	1976-78	1.7	.9	8.0	2.8	4.7	18.6	*	30.4	6.4	26.6	100.0
20-24	1968-70	6.8	1.3	9.7	2.0	8.9	36.2	*	12.2	3.7	19.3	100.0
	1976-78	6.2	2.3	8.9	3.4	11.8	26.4	*	19.3	2.7	19.1	100.0
25-29	1968-70	7.5	2.4	8.1	3.1	12.3	37.6	.1	10.4	3.1	15.5	100.0
	1976-78	11.3	4.9	8.0	3.2	16.5	28.2	.1	13.2	2.3	12.4	100.0
Nonblack Females												
16-17	1968-70	2.4	.1	19.8	14.5	.1	5.8	27.5	26.4	2.7	.8	100.
	1976-78	1.7	.3	22.4	12.1	.9	4.3	13.7	38.3	3.9	2.5	100.
18-19	1968-70	3.7	.3	49.8	10.8	.5	11.3	4.5	17.7	.6	.9	100.
	1976-78	4.0	1.1	37.1	11.4	1.0	10.8	3.3	27.6	1.4	2.4	100.
20-24	1968-70	17.0	1.5	48.3	5.3	.6	11.6	1.9	13.0	.4	.4	100.
	1976-78	13.0	3.5	41.0	7.2	1.5	11.0	1.3	19.2	1.0	1.4	100.
25-29	1968-70	22.3	2.5	39.2	4.6	.6	14.8	1.3	12.9	1.3	.4	100.
	1976-78	23.0	5.2	36.4	5.2	1.4	10.8	1.3	14.8	.9	1.1	100.
Black Females												
16-17	1968-70	2.2	*	26.9	6.5	.9	6.1	14.3	33.0	8.3	1.7	100
	1976-78	1.8	.9	33.6	6.9	.5	3.7	6.9	39.2	3.2	3.2	100
18-19	1968-70	1.9	*	43.1	2.9	.2	13.1	8.3	26.4	3.3	.7	100
	1976-78	3.0	.7	35.4	6.4	.7	13.9	4.2	32.2	1.2	2.2	100
20-24	1968-70	7.7	.4	34.4	3.7	.9	20.9	7.4	22.6	1.3	.8	100
	1976-78	8.6	1.3	38.3	3.5	.7	18.3	1.9	25.2	.9	1.5	100
25-29	1968-70	11.7	.6	23.4	1.8	.6	22.0	10.6	27.4	1.2	.7	100
	1976-78	16.7	1.8	34.7	2.6	1.3	18.9	1.8	20.5	.5	1.2	100

Source: March Current Population Survey.

* Less than .05.

of 20-24 year-old black women, but this effect is almost completely offset by improvements in education levels. By contrast, neither schooling nor welfare recipiency has much of an effect for nonblack women. For 25-29 year-old black and nonblack women, rising educational attainment has had a major dampening effect on unemployment trends.

To summarize, the decline in black youth labor force participation trends during the 1970s can be partly accounted for by rising school enrollment, reflecting the long-run effects of enrollment observed since 1950. There are lesser but still notable dampening effects on labor force participation of men in their twenties of decreases in proportions of men who are married. For black women in their twenties, increases in welfare recipiency may have depressed labor force participation rates. By contrast, unemployment trends are largely insensitive to trends in the social and demographic factors measured in our analysis. Except for women in their twenties, where rising educational attainment has negatively affected unemployment, and for black women, where rising welfare recipiency may have contributed to the rise in unemployment, unemployment changes result from factors not included in our analysis.

C. Unemployment and Changes in Occupational Structure

In an earlier section we discussed changes in the occupational structure between 1950 and 1970 and noted important declines in farm and private household employment which disproportionately affected black employment despite the offsetting impact of growth in white-collar and skilled blue-collar employment. This section describes changes in occupational distribution between 1968 and 1978 using data from the March CPS.

Table 12 shows the occupational distributions of employed persons for 1968-1970 and 1976-1978. Relative to those for the 1950-1970 era, changes in occupational distributions have been limited during the 1970s.11/ The largest changes are general relative increases in service employment, moderate increases in crafts workers, declines in clerical workers for men, declines in operatives and farm workers for black men, and increases in clerical workers and declines in private household and farm workers for black women.

Following our analysis of the 1950-1970 period, we decomposed changes in the unemployment differential in the 1970s into parts associated with race differentials in specific occupational growth rates. This decomposition is presented in Table 13. (See the discussion of 1950-1970 for the procedures used to calculate the components.) The last column of the first panel shows the change in the black-white differential in the percentage of the labor force employed. For each age-sex group there is a broadening differential, signifying worsening labor market conditions for young blacks. (The unemployment rates from which the changes are

---

11/ There are some discrepancies between occupational distributions reported for 1968-1970 and those reported above from the 1970 Census. These apparently result from sampling variability in the March CPS. Although we discuss the CPS distributions here, the Census estimates are generally preferable.

TABLE 13

OCCUPATIONAL COMPONENTS OF CHANGES IN RACIAL EMPLOYMENT DIFFERENTIALS, 1968-1978

	Profes. & Tech.	Managers	Clerical	Sales	Crafts	Operatives	Private Household	Service	Farm Workers	Laborers	Total	
Changes												
Males												
16-17	-.6	-.3	-2.6	.3	-.8	-2.9	.4	-3.7	-5.0	-2.3	-17.5	
18-19	.4	-.3	-.6	2.2	-2.7	-4.7	*	-.8	-2.0	-3.5	-12.0	
20-24	2.6	.1	1.7	1.6	-2.2	-8.1	*	.8	-1.3	-5.6	-10.4	
25-29	5.1	1.3	.7	-.1	1.8	-5.7	*	-.2	-.8	-4.5	-2.4	
Females												
16-17	.3	.4	-.4	2.2	-1.0	-.5	7.0	-8.5	-4.5	-.7	-5.7	
18-19	.3	-.3	2.4	1.8	-.1	-.5	-2.5	-8.1	-2.5	-.4	-9.9	
20-24	4.4	-1.0	9.0	-1.9	-1.0	-2.6	-4.1	-4.8	-1.0	-.5	-3.5	
25-29	3.3	-1.5	11.3	.1	-.2	-.1	-8.1	-9.2	-.3	-.3	-5.0	
Percentages of Total Positive Change												
Males												
16-17	0	0	0	38.1	0	0	61.9	0	0	0	100.0	(.7)
18-19	14.9	0	0	83.8	0	0	1.4	0	0	0	100.0	(2.6)
20-24	38.8	.8	25.5	23.0	0	0	.1	11.9	0	0	100.0	(6.7)
25-29	57.5	14.0	8.1	0	20.3	0	*	0	0	0	100.0	(8.9)
Females												
16-17	2.6	3.8	0	22.5	0	0	71.1	0	0	0	100.0	(9.8)
18-19	6.1	0	53.3	40.6	0	0	0	0	0	0	100.0	(4.4)
20-24	32.7	0	67.3	0	0	0	0	0	0	0	100.0	(13.4)
25-29	22.2	0	77.4	.5	0	0	0	0	0	0	100.0	(14.7)
Percentages of Total Negative Change												
Males												
16-17	-3.1	-1.4	-14.1	0	-4.3	-15.9	0	-20.2	-27.9	-13.0	100.0	(-18.0)
18-19	0	-1.7	-4.3	0	-18.4	-32.2	0	-5.7	-13.9	-23.7	100.0	(-14.7)
20-24	0	0	0	0	-12.6	-47.0	0	0	-7.8	-32.7	100.0	(-17.2)
25-29	0	0	0	-.6	0	-50.6	0	-1.7	-7.4	-39.8	100.0	(-11.2)
Females												
16-17	0	0	-2.4	0	-6.2	-3.0	0	-54.8	-29.1	-4.4	100.0	(-15.4)
18-19	0	-1.8	0	0	-.5	-3.7	-17.3	-56.5	-17.2	-3.0	100.0	(-14.3)
20-24	0	-5.8	0	-11.5	-5.8	-15.5	-24.1	-28.8	-5.8	-2.8	100.0	(-16.6)
25-29	0	-7.9	0	0	-.8	-.6	-41.3	-46.7	-1.4	-1.3	100.0	(-19.7)

Source: March Current Population Survey.

* Less than |.05|.

** Percentages may not add to total because of rounding.

calculated are reported in Table A6.) These changes can be regarded as the outcome of positive and negative changes in the employment differential, which are summarized in the last columns of the second and third panels of the table. Except for older women, however, the positive changes are small and the total change is close to the negative change.

The lower two panels present the percentage decompositions of the positive and negative changes. For men the negative change in the employment differential comprises changes in a number of occupational categories. Unlike the 1950-1970 period, no clear source of occupational change makes up the bulk of the change in the race differential. Among the components the differential rates of growth between blacks and whites in operative jobs is the largest. Black operative employment declined during this period while white employment was stable (see Table A5).

For women differential employment changes are more concentrated in specific occupations. The largest component is associated with differential growth in service employment, where white women enjoyed much greater growth than blacks. There is also a substantial component associated with the more rapid decline in private household employment for older black women. Much of the effect on older women, however, is offset by the greater relative growth of clerical employment for black women during the 1970s.

On the whole, the analysis of occupational changes in relative employment provides little evidence that occupational changes have been a major source of changes in race differentials in unemployment. For men, the change in relative employment is associated with relative declines in occupational employment for a number of occupations, suggesting that no specific occupational changes have forced black youths out of work. For women the patterns are more ambiguous inasmuch as the relative declines in black employment do appear to be largely associated with greater white growth in service employment. But this suggests no obvious causal mechanism. On balance, if we are to explain recent increases in racial unemployment differentials, we will have to look elsewhere.

VI. CONCLUSION

The employment status of black youths relative to that of whites has deteriorated considerably since World War II. The deterioration comprises two phases: 1950-1970, when the worsening of the relative status of blacks was confined to teenagers; and the 1970s, when young persons in their twenties as well as teenagers were affected.

Despite the deteriorating relative labor market position of black youths, however, there is little evidence that relative to whites young blacks are increasingly excluded from all productive and worthwhile activities. Rather, the proportion of black youths enrolled in school has increased markedly relative to that of whites and, during the 1970s black male participation in the armed forces has surpassed that of whites, a reversal of historic white overrepresentation in the military. Thus, black youths are increasingly engaged in activities that may enhance

their long-run employability albeit at the expense of their labor force participation as youths. This is not, of course, to deny the significant worsening of conditions within the youth labor force for young blacks.

No comprehensive analysis exists of the many possible causes of change in the youth labor force. We have attempted to cast light upon several explanations that may be important and that have been neglected in recent discussions of employment trends. Without ruling out the possible importance of market explanations of labor force trends commonly mentioned in recent discussions (Mare and Winship, 1979a), we have emphasized two sources of change—shifts in occupation-specific employment opportunities available to youths and social-demographic trends which alter the composition of the youth population on factors related to labor force status.

A likely cause of occupational change in the relative labor force status of black and white teenagers during the 1950-1970 period is the elimination of a sizable proportion of jobs requiring limited skill and experience. For both sexes there were drastic declines in proportions of youths working on farms and in proportions of young women working in private households. Since blacks were disproportionately represented in these occupations in 1950 and experienced a more rapid decline, they disproportionately suffered the elimination of these jobs. There was, of course, considerable job growth elsewhere, but primarily in white-collar and skilled blue-collar occupations. For out-of-school youths with limited schooling and work experience, jobs suited to their qualifications were not replaced. We were not able to estimate how much of the rise in unemployment of black teenagers can be attributed to occupational shifts. But our calculations suggest that this is a major cause and that further exploration is in order.

From 1950 to 1970 rising black school enrollment rates explain sizable proportions of the declines in labor force participation of blacks relative to whites. This results in part from the somewhat greater enrollment increase for blacks for some age groups and in part because black youths are more likely than whites to leave the labor force if they enter school, a differential that is widening over time. With regard to the effect of enrollment trends on race differentials in unemployment, however, we have presented no evidence. Enrollment trends may have affected unemployment, however, by selecting from the labor force those youths who would have been most likely to be employed had they remained. This raises the unemployment rate of persons remaining in the labor force. Since black students leave the labor force more than whites, their unemployment rates increase more. Elsewhere we have presented fragmentary evidence for this hypothesis (Mare and Winship, 1979b), but it merits further investigation.

The continued deterioration of the relative status of young blacks during the 1970s is more problematic. Occupational shifts no longer seem to be major sources of change inasmuch as the decline in farm and private household employment was almost complete by 1970. Race differentials in school enrollment trends continue to explain the widening race differential in labor force participation. As for unemployment, our analysis finds trends largely unresponsive to the array of social and

demographic factors that we considered. Relative improvements in educational attainment for blacks tend to mitigate their worsening status. There is also some evidence that marriage delays and increased public assistance recipiency have contributed to the employment deterioration for some groups of black youths by reducing incentives to take low-paying employment. These effects, however, are too small to constitute major components of employment trends and, in any case, have not been evaluated with the kinds of longitudinal data that are needed to assess the causal relationships among labor force status, sources of income, and marital and family arrangements.

For the 1970s we were again unable to explore fully the impact of schooling trends. It is in the 1970s when black enrollment rates rise much more rapidly than those of whites, particularly for youths in their twenties. And, as we have emphasized, the employment deterioration for youths in their twenties has been concentrated in this period. This suggests that delays in labor force entry and the selection of more employable youths out of the labor force are important mechanisms through which black enrollment trends explain relative black employment deterioration in the 1970s.

VII. APPENDIX:

DECOMPOSITION OF CHANGE IN LABOR FORCE RATES: 1968-1978

The multivariate decomposition of change in unemployment and labor force participation rates consists of specifying a statistical model generating the observed joint distributions of labor force statuses and demographic forces, estimating the model, and using the model and means of the demographic factors to compute components of change resulting from group-specific rates, population composition, and interaction.

The estimated model is as follows. For convenience of discussion, assume that there are two demographic factors. For each of the two labor force rates for each age-race-sex group, let r_{jkt} be the specific rate for the j^{th} category of the first factor ($j = 1,\ldots,J$) and the k^{th} category of the second factor ($k = 1,\ldots,K$) in the t^{th} year ($t = 1,2$). Then we can specify a logit model of the form

$$\log\left(\frac{r_{jkt}}{1 - r_{jkt}}\right) = \lambda_{0t} + \lambda_{jt} + \lambda_{kt} \qquad (A1)$$
$$(j = 2,\ldots,J;\ k = 2,\ldots,K;\ t = 1,2;\ 0<r_{jkt}<1),$$

where the λ_{jt} are parameters denoting the effects of membership in the j^{th} category of the first variable relative to the first category of that variable in the t^{th} year; the λ_{kt} are parameters denoting the effects of membership in the k^{th} category of the second variable relative to the first category of that variable in the t^{th} year, and λ_{0t} is a year-specific constant. For each age-race-sex group for each of the two labor force rates, this model is estimated by maximum likelihood (Bishop, Fienberg, and Holland, 1975).

We considered more complex specifications of the model, such as incorporating the effects of higher-order interactions among the independent variables. For most age-race-sex groups, however, (A1) fit the data well and hence this specification was chosen for calculating the decomposition.

The change in the logits of the labor force rates between the two years can be approximately decomposed into the following parts.

$$\log\left(\frac{r_{jk2}}{1-r_{jk2}}\right) - \log\left(\frac{r_{jk1}}{1-r_{jk1}}\right) = \underset{(1)}{(\lambda_{02}-\lambda_{01})} + \underset{(2)}{[\textstyle\sum_j (p_{j2}-p_{j1})\lambda_{j1}]} + \underset{(3)}{[\textstyle\sum_k (p_{k2}-p_{k1})\lambda_{k1}]} +$$
$$\underset{(4)}{[\textstyle\sum_j (\lambda_{j2}-\lambda_{j1})p_{j1}]} + \underset{(5)}{[\textstyle\sum_k (\lambda_{k2}-\lambda_{k1})p_{k1}]} + \underset{(6)}{[\textstyle\sum_j (\lambda_{j2}-\lambda_{j1})(p_{j2}-p_{j1}) + \sum_k (\lambda_{k2}-\lambda_{k1})(p_{k2}-p_{k1})]} \qquad (A2)$$

where $\log [r_{jkt}/(1-r_{jkt})]$ is the average of the logits of the specific rates in the t^{th} year, and p_{jt} and p_{kt} are the proportions of the population in the t^{th} year in the j^{th} category of the first factor and the k^{th} category of the second factor respectively. The six components on the right hand side of (A2) are as follows: (1) unmeasured changes, (2) changes in population composition on the first factor, (3) changes in composition on the second factor, (4) changes in contrasts among the category-specific rates for the first factor, (5) changes in the contrasts among category-

TABLE A1

RATIO OF NONWHITE TO WHITE UNEMPLOYMENT RATES, 1954-1978

Year	Age							
	16-17	18-19	20-24	25-34	35-44	45-54	55-64	65+
1954	1.17	1.52	1.81	2.22	2.08	2.00	1.50	1.79
1955	1.26	1.78	2.07	2.97	2.43	1.93	2.04	1.80
1956	1.55	2.02	2.31	2.66	2.56	1.87	2.21	1.40
1957	1.43	2.13	1.99	2.55	2.02	1.80	1.11	1.65
1958	1.74	2.02	1.95	2.26	2.12	1.67	1.78	1.83
1959	1.60	2.32	2.16	2.73	2.29	1.78	1.69	1.58
1960	1.62	1.98	1.77	2.21	2.32	1.94	1.95	1.53
1961	1.86	1.64	1.80	2.28	2.39	1.99	1.79	1.75
1962	1.56	2.15	2.02	2.58	2.48	2.17	1.88	2.38
1963	1.77	2.15	2.19	2.37	2.33	1.87	1.66	2.07
1964	1.79	1.94	2.06	2.49	2.18	1.86	1.88	1.65
1965	2.07	1.88	1.82	2.18	2.16	1.94	1.64	1.30
1966	2.02	2.50	2.16	2.44	2.04	2.12	1.66	1.87
1967	2.35	2.44	2.10	2.29	1.95	1.73	1.68	1.65
1968	2.28	2.34	1.96	2.39	1.95	1.54	1.77	1.22
1969	2.09	2.48	2.02	1.93	1.67	1.67	1.75	1.16
1970	2.02	2.29	1.86	1.79	1.44	1.31	1.27	0.95
1971	2.11	2.13	1.86	1.88	1.63	1.35	1.31	0.96
1972	2.18	2.58	1.91	2.03	1.86	1.45	1.38	1.54
1973	2.28	2.61	2.20	2.03	1.83	1.41	1.23	1.21
1974	2.32	2.45	2.10	1.80	1.72	1.48	1.23	1.28
1975	2.02	2.12	1.85	1.74	1.60	1.61	1.05	1.40
1976	2.18	2.25	1.99	1.88	1.70	1.59	1.35	1.28
1977	2.31	2.72	2.45	2.06	1.04	1.42	1.55	1.26
1978	2.37	2.51	2.23	1.93	1.67	1.69	1.72	1.66

Source: U. S. Department of Labor.

specific rates for the second factor, and (6) interactions between changes in category-specific rates and in population composition for the two factors.

Expression (A2) is only an approximation because in the logit model--unlike the linear model--the averages of the logits of the specific rates do not equal the means of the independent variables weighted by the parameters. In the decompositions presented in the text, the discrepancy between the change in logits predicted by the decomposition and the actual change is included in the term (1) for changes in the constant term.

The model (A1) and decomposition (A2) can straightforwardly be extended to an arbitrary number of factors.

TABLE A2

LABOR FORCE PARTICIPATION RATES BY ENROLLMENT STATUS, 1950-1970

	1950	1960	1970	Change 1950-1970*
White Males				
Enrolled				
16-17	22.7	32.5	35.6	12.9
18-19	29.9	44.8	44.6	14.7
20-24	38.9	58.0	54.0	15.1
25-29	62.5	78.8	76.9	14.4
Not Enrolled				
16-17	72.8	62.7	57.3	-15.5
18-19	87.9	87.9	83.7	-4.2
20-24	92.3	94.0	91.6	-.7
25-29	94.5	96.3	95.6	1.1
Nonwhite Males				
Enrolled				
16-17	24.5	18.8	19.0	-5.5
18-19	30.7	33.9	29.9	-.8
20-24	43.7	54.4	46.5	2.8
25-29	57.1	75.3	67.3	10.2
Not Enrolled				
16-17	76.2	55.2	40.7	-35.5
18-19	82.9	74.8	67.9	-15.0
20-24	85.2	85.9	80.8	-4.4
25-29	86.8	88.4	87.0	.1
White Females				
Enrolled				
16-17	12.6	19.2	23.9	11.2
18-19	24.1	33.2	35.9	11.8
20-24	38.2	44.7	45.4	7.2
25-29	44.5	47.5	56.8	12.3
Not Enrolled				
16-17	34.5	33.3	32.4	-2.1
18-19	54.6	57.2	61.3	6.7
20-24	43.8	44.9	58.3	14.5
25-29	31.0	32.9	43.6	12.6
Nonwhite Females				
Enrolled				
16-17	9.8	9.3	12.0	2.2
18-19	14.4	20.4	24.8	10.4
20-24	30.3	36.4	41.7	11.4
25-29	45.4	48.1	58.3	12.9
Not Enrolled				
16-17	30.1	26.2	25.8	-4.4
18-19	36.9	42.7	47.6	10.6
20-24	40.5	46.4	58.0	17.5
25-29	41.8	46.7	57.8	16.0

Source: U. S. Bureau of the Census.
* Changes may differ from differences in rates because of rounding.

TABLE A3

OCCUPATIONAL GROWTH RATES, 1950-1970

	Profes. & Tech.	Managers	Clerical	Sales	Crafts	Operatives	Private Household	Service	Farm Workers	Laborers
White/Nonblack Males*										
16-17	5.6	1.5	1.9	0.6	2.1	1.3	2.0	4.4	-0.6	2.9
18-19	2.0	1.1	0.8	0.4	1.3	0.6	1.1	3.3	-0.7	1.1
20-24	2.3	0.8	0.4	0.1	0.5	0.0	-0.1	1.6	-0.7	0.1
25-29	1.4	0.4	0.1	0.0	0.3	-0.1	-0.5	0.8	-0.7	-0.2
White/Nonblack Females										
16-17	1.8	1.0	3.0	0.9	2.6	0.1	0.4	3.7	-0.4	3.3
18-19	0.0	1.2	0.8	0.5	1.3	0.0	0.0	2.4	-0.4	1.9
20-24	1.5	1.3	0.8	0.3	0.9	0.1	0.1	2.2	-0.5	1.4
25-29	1.7	0.6	0.4	0.0	0.5	-0.1	0.1	1.1	-0.6	0.7
Nonwhite/Black Males										
16-17	7.5	1.9	9.2	1.5	2.5	0.3	-0.1	1.5	-0.9	0.5
18-19	9.5	1.3	5.7	1.7	2.5	0.9	-0.8	0.8	-0.9	0.1
20-24	4.8	1.8	2.7	1.1	1.6	0.6	-0.6	0.2	-0.8	-0.3
25-29	2.3	1.0	1.2	1.2	1.2	0.4	-0.6	0.1	-0.8	-0.4
Nonwhite/Black Females										
16-17	14.6	2.3	283.5	6.9	2.0	0.7	-0.7	2.0	-0.9	2.4
18-19	1.9	1.3	14.8	3.9	2.6	1.1	-0.7	1.1	-0.9	1.2
20-24	2.2	1.4	7.3	2.6	2.4	0.9	-0.7	0.9	-0.8	1.2
25-29	1.9	0.9	4.5	1.1	33.4	0.6	-0.6	0.6	-0.8	0.4

Source: U. S. Bureau of the Census.

* 1970 occupational distributions are for nonblacks and blacks; 1950 distributions are for whites and nonwhites.

TABLE A4

UNEMPLOYMENT RATES, 1950 AND 1970

	Unemployment Rates 1950	Unemployment Rates 1970	Change in Rate	Change in Differential
16-17 Year-Olds				
White/Nonblack Males*	12.7	12.4	-.2	-8.7
Nonwhite/Black Males	11.6	20.1	8.5	
White/Nonblack Females	13.3	12.6	-.7	-7.7
Nonwhite/Black Females	18.2	25.3	7.1	
18-19 Year-Olds				
White/Nonblack Males	11.0	9.2	-1.8	-4.9
Nonwhite/Black Males	13.5	16.6	3.0	
White/Nonblack Females	7.3	9.2	1.9	-1.6
Nonwhite/Black Females	16.9	20.4	3.5	
20-24 Year-Olds				
White/Nonblack Males	7.6	6.3	-1.3	-.6
Nonwhite/Black Males	11.5	10.8	-.7	
White/Nonblack Females	4.5	5.9	1.3	1.2
Nonwhite/Black Females	11.8	11.9	.1	
25-29 Year-Olds				
White/Nonblack Males	4.6	3.2	-1.3	-2.0
Nonwhite/Black Males	9.0	5.6	-3.4	
White/Nonblack Females	4.0	4.9	1.0	2.1
Nonwhite/Black Females	9.1	8.0	-1.1	

Source: U. S. Bureau of the Census.

* 1970 rates for nonblacks and blacks; 1950 rates are for whites and nonwhites.

TABLE A5

OCCUPATIONAL GROWTH RATES, 1968-70--1976-78

	Profes. & Tech.	Managers	Clerical	Sales	Crafts	Operatives	Private Household	Service	Farm Workers	Laborers
Nonblack Males										
16-17	-0.4	1.0	-0.3	-0.2	0.3	-0.2	-0.2	0.6	0.0	0.1
18-19	-0.2	0.7	-0.2	-0.1	0.7	-0.1	-0.1	0.9	0.4	0.3
20-24	0.0	0.6	-0.1	0.3	0.7	0.2	0.4	1.0	0.5	0.9
25-29	0.2	0.4	0.1	0.3	0.4	0.0	-0.7	0.9	0.3	0.5
Nonblack Females										
16-17	-0.1	1.7	0.5	0.1	12.5	0.0	-0.3	0.9	0.9	3.0
18-19	0.4	3.6	0.0	0.4	1.4	0.2	0.0	1.0	2.4	2.5
20-24	0.0	2.0	0.1	0.8	2.2	0.2	-0.1	0.9	2.3	4.1
25-29	0.8	2.6	0.6	1.0	2.7	0.3	0.7	1.0	0.2	3.4
Black Males										
16-17	-0.8	-0.4	-0.8	-0.7	-0.4	-0.8	0.9	-0.1	-0.8	-0.3
18-19	-0.6	0.6	-0.5	0.1	0.0	-0.6	0.0	0.3	-0.3	-0.2
20-24	-0.1	0.8	-0.1	0.7	0.3	-0.3	0.0	0.6	-0.3	0.0
25-29	0.6	1.2	0.1	0.1	0.5	-0.2	0.0	0.4	-0.2	-0.1
Black Females										
16-17	-0.3	17.5	0.1	-0.1	-0.5	-0.5	-0.6	0.0	-0.7	0.6
18-19	0.2	23.5	-0.4	0.8	1.5	-0.2	-0.6	0.0	-0.7	1.5
20-24	0.3	3.2	0.3	0.1	-0.1	0.0	-0.7	0.3	-0.2	1.1
25-29	1.1	2.9	1.1	1.1	1.9	0.2	-0.8	0.1	-0.4	1.3

Source: March Current Population Survey.

TABLE A6

UNEMPLOYMENT RATES, 1968-70 AND 1976-78

	Unemployment Rates 1968-70	Unemployment Rates 1976-78	Change in Rate	Change in Differential
16-17 Year-Olds				
Nonblack Males	15.4	21.6	6.3	-17.3
Black Males	26.2	49.8	23.6	
Nonblack Females	14.3	19.6	5.3	-5.7
Black Females	34.7	45.7	11.0	
18-19 Year-Olds				
Nonblack Males	9.3	15.5	6.3	-12.1
Black Males	20.8	39.1	18.3	
Nonblack Females	10.3	15.9	5.6	-9.8
Black Females	26.0	41.5	15.5	
20-24 Year-Olds				
Nonblack Males	6.4	12.0	5.6	-10.5
Black Males	9.4	25.4	16.0	
Nonblack Males	5.8	10.6	4.8	-3.4
Black Females	16.5	24.7	8.2	
25-29 Year-Olds				
Nonblack Males	2.7	6.9	4.1	-2.3
Black Males	6.4	12.9	6.4	
Nonblack Females	4.9	7.3	2.4	-5.0
Black Females	8.6	16.0	7.4	

Source: March Current Population Survey.

VIII. REFERENCES

Ashenfelter, Orley, and John Ham. 1979. "Education, Unemployment, and Earnings." Journal of Political Economy 87 (October): S99-S116.

Bowen, William G., and T. Aldrich Finegan. 1969. The Economics of Labor Force Participation. Princeton: Princeton University Press.

Coleman, James S. 1976. "The School to Work Transition." Pp. 35-40 in The Teenage Unemployment Problem: What Are the Options? Report of a Congressional Budget Office Conference. Washington, D.C.: Government Printing Office.

Duncan, Otis Dudley. 1968. "Inheritance of Poverty or Inheritance of Race?" Pp. 85-110 in On Understanding Poverty, edited by Daniel P. Moynihan. New York: Basic Books.

Fearn, R. M. 1968. "Labor Force and School Participation of Teenagers." Unpublished Ph.D. dissertation, University of Chicago.

Fisher, Alan A. 1973. "The Problem of Teenage Unemployment." Unpublished Ph.D. dissertation, University of California, Berkeley.

Gustman, Alan L., and Thomas L. Steinmeier. 1979. "The Impact of the Market and the Family on Youth Enrollment and Labor Supply." Unpublished manuscript, Dartmouth College.

Lerman, Robert I. 1970. "An Analysis of Youth Labor Force Participation, School Activity and Employment Rates." Unpublished Ph.D. dissertation, Massachusetts Institute of Technology.

Mare, Robert D., and Christopher Winship. 1978. "Patterns of School Attendance and Labor Force Activities after High School." Unpublished manuscript, Department of Sociology, The University of Wisconsin, and National Opinion Research Center, Chicago.

_____. 1979a. "Changes in Race Differentials in Youth Labor Force Status: A Review of the Literature." Final Report to the National Commission for Employment Policy.

_____. 1979b. "Enrollment, Enlistment, and Employment: Implications of Schooling and the Military for Recent Trends in Youth Unemployment." Paper presented at the Annual Meeting of the American Sociological Association, Boston.

_____. 1979c. "Social and Demographic Sources of Change in the Youth Labor Market." Proposal to the National Science Foundation from The University of Wisconsin, Madison.

National Commission on Employment and Unemployment Statistics. 1979. Counting the Labor Force: Preliminary Draft Report. Washington, D.C.

U. S. Bureau of the Census. 1975. Historical Statistics of the United States: Colonial Times to 1970, Bicentennial Edition, Part 1. Washington, D.C.: Government Printing Office.

Winsborough, H. H., and Peter Dickinson. 1971. "Components of Negro-White Income Differences." Pp. 6-8 in Proceedings of the Social Statistics Section, American Statistical Association.