TABLE D.5

DETERMINANTS OF RESERVATION WAGES, FOR SOPHOMORE AND SENIOR STUDENTS: SPRING 1980

(unstandardized regression coefficients)

Explanatory Variable	Sophomores	Seniors
Female	-0.37 (-48.51)	-0.28 (-49.92)
Black	0.17 (13.34)	-0.03 (-3.27)
Hispanic	0.07 (4.62)	-0.07 (-6.10)
Age	0.10 (14.48)	0.03 (5.33)
Family income[a]	0.02 (5.95)	-0.01 (-0.71)
Living in Western region	0.12 (11.74)	0.09 (13.00)
Type of community		
Urban	0.12 (11.58)	0.07 (9.23)
Suburban	0.06 (6.81)	0.06 (8.89)
School program		
Vocational	-0.02 (-2.18)	-0.01 (-0.86)
College preparatory	0.03 (3.79)	0.14 (20.35)
Grade point average	-0.20 (-22.65)	-0.23 (-37.27)
Intercept	4.63	5.78
R^2	0.16	0.27

NOTE: Student's t-values are in parenthesis. Figures larger than 2.58 are statistically significant at $\alpha = 0.01$.

[a]Family income is in $10,000 units.

TABLE D.6

MEAN AND STANDARD DEVIATION FIGURES FOR VARIABLES INCLUDED IN THE REGRESSION MODELS FOR WAGES, BY GRADE: SPRING 1980

Variable	Sophomores		Seniors	
	Mean	Standard Deviation	Mean	Standard Deviation
Wages	2.66	0.96	3.28	0.63
Female[a]	0.49	0.50	0.50	0.50
Black[a]	0.07	0.26	0.07	0.26
Hispanic[a]	0.06	0.25	0.06	0.23
Age	15.61	0.68	17.49	0.61
Family income (in $10,000 units)	2.11	1.12	2.24	1.17
Living in the West[a]	0.18	0.38	0.18	0.38
Urban community[a]	0.20	0.40	0.19	0.39
Suburban community[a]	0.49	0.50	0.51	0.50
In vocational program[a]	0.21	0.41	0.26	0.44
In college preparatory program[a]	0.31	0.46	0.36	0.48
Grade point average[b]	7.89	0.84	8.07	0.76
Total sample size	12,236		17,398	

[a]Since these variables receive a (1) if true and (0) otherwise, the mean represents the proportion of the population in that category.

[b]See appendix A for a description of this variable.

TABLE D.7

DETERMINANTS OF WAGES FOR STUDENTS CURRENTLY EMPLOYED, BY GRADE: SPRING 1980

(unstandardized regression coefficients)

Explanatory Variable	Sophomores	Seniors
Female	-0.78 (-49.91)	-0.36 (-41.56)
Black	0.12 (3.85)	-0.10 (-6.03)
Hispanic	0.10 (2.99)	-0.12 (-6.50)
Age	0.16 (11.17)	0.03 (3.57)
Family income[a]	0.06 (8.15)	0.01 (2.72)
Living in the Western region	0.16 (7.77)	0.16 (14.38)
Type of community		
Urban	0.06 (2.71)	0.07 (5.57)
Suburban	-0.01 (-0.67)	0.06 (6.14)
School program		
Vocational	-0.05 (-2.59)	0.01 (1.42)
College preparatory	0.05 (2.57)	0.17 (15.45)
Grade point average	-0.22 (-22.40)	-0.29 (-26.61)
Intercept	5.41	6.03
R^2	0.24	0.22

NOTE: Student's t-values are in parentheses. Figures larger than 2.58 are statistically significant at $\alpha = 0.01$.

[a]Family income in $10,000 units.

APPENDIX E

STANDARD ERROR ESTIMATES FOR PERCENTAGES

APPENDIX E

STANDARD ERROR ESTIMATES FOR PERCENTAGES

Standard errors or confidence intervals are not reported in the tabulations and analysis of this report. In this appendix, however, we provide information that allows calculation of approximate standard errors for most percentages based on student data.

The general equation for calculating the approximate standard error of a percentage is:

$$s.e.(p) = D\sqrt{p(100-p)/n}$$

where p is the percentage for which the standard error is to be calculated; s.e.(p) is the approximate standard error of p; D is a correction factor, which increases with the departure of the sample from a simple random sample as a result of clustering or other aspects of sample design; and n is the unweighted number of students in the particular class over which the percentage is calculated.

The values of D and n for the classes on which most of the percentages in this report are based are given in table E.1. In keeping with the structure of the report, sample sizes are reported for employed students as well as for the entire population class. If one were interested in the standard error of the proportion employed among black sophomores (see table 2.3), for example, it would be appropriate to use the entire sample figure (4,106) for calculations; if one were interested in an issue such as the standard error of the proportion earning below minimum wage among employed black sophomores (see table 3.10),

TABLE E.1

CORRECTION FACTORS AND SAMPLE SIZES FOR CLASSES ON WHI(
FOR THE TOTAL STUDENT BODY ARE BASED

	Total	Male	Female	Bla
Sophomores				
D (correction factor)	1.614	1.417	1.423	1
N_t (sample size) .	30,263	13,459	14,634	4,106
N_e (sample size: employed only)	12,272	5,825	5,644	1,176
Seniors				
D (correction factor)	1.620	1.441	1.422	1
N_t (sample size) .	28,465	12,993	14,189	3,804
N_e (sample size: employed only)	17,398	8,333	8,373	1,869

NOTE: Details may not add to totals because of missing informa

the appropriate sample figure would be 1,176, as shown in table E.1. When percentages are based on other classifications or on subclassifications within each of these groups, it is appropriate to use the subclass size together with the largest correction factor of those shown in the table that could apply to the class or subclass in question.

Approximate standard errors for values of 50 percent, 75 percent, and 90 percent (the latter two of which have the same standard errors as 25 percent and 10 percent respectively) are presented in tables E.2 and E.3. These were calculated from the data shown in table E.1 using the equation for calculating standard errors, discussed above.

It should be emphasized that these standard errors are approximations. As such, they are intended merely to provide guidance, both about the confidence interval around a percentage estimate and about the chance that a difference between two percentages could be due to sampling error.

TABLE E.2

APPROXIMATE STANDARD ERRORS FOR PERCENTAGES BASED ON PRINCIPAL CLASSIFICATIONS USED IN THIS REPORT

	Total	Male	Female	Black	Hispanic	White
Sophomores						
p = 50 percent	0.5	0.6	0.6	1.1	1.2	0.5
p = 75 percent or 25 percent	0.4	0.5	0.5	1.0	1.0	0.4
p = 90 percent or 10 percent	0.3	0.4	0.4	0.7	0.7	0.3
Seniors						
p = 50 percent	0.5	0.6	0.6	1.1	1.3	0.5
p = 75 percent or 25 percent	0.4	0.5	0.5	1.0	1.1	0.5
p = 90 percent or 10 percent	0.3	0.4	0.4	0.7	0.8	0.3

TABLE E.3

APPROXIMATE STANDARD ERRORS FOR PERCENTAGES BASED ON PRINCIPAL CLASSIFICATIONS FOR EMPLOYED STUDENTS

	Total	Male	Female	Black	Hispanic	White
Sophomores						
p = 50 percent	0.7	0.9	0.9	2.1	2.1	0.8
p = 75 percent or 25 percent	0.6	0.8	0.8	1.8	1.8	0.6
p = 90 percent or 10 percent	0.4	0.6	0.6	1.3	1.2	0.5
Seniors						
p = 50 percent	0.6	0.8	0.8	1.6	1.8	0.7
p = 75 percent or 25 percent	0.5	0.7	0.7	1.4	1.5	0.6
p = 90 percent or 10 percent	0.4	0.5	0.5	1.0	1.1	0.4

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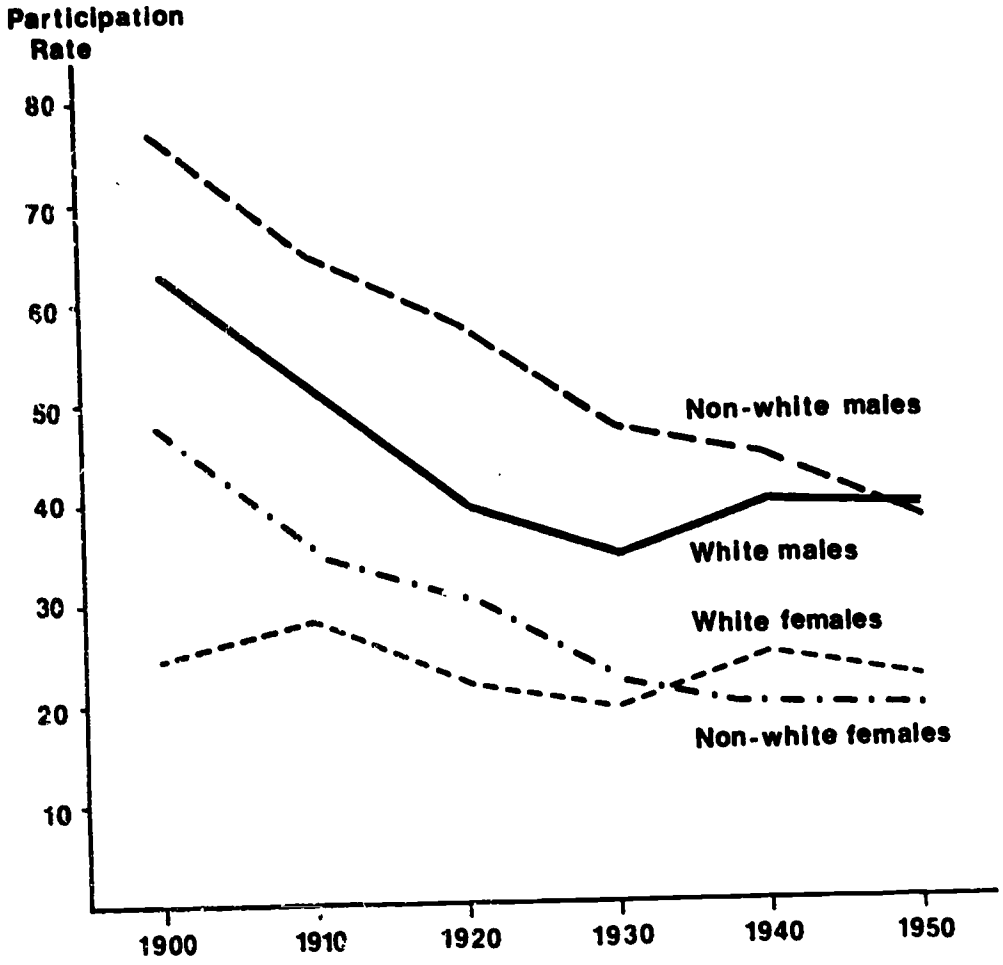

Fig. 1.1. Labor force participation rates of 14- to 19-year olds, by race and sex: 1900 to 1950.

on young people may present for them and the society a most severe problem" (Clark 1957).

The widespread belief that meaningful work begins upon the completion of schooling has been challenged in recent years in reports by the President's Science Advisory Committee (1974), the National Panel on High Schools and Adolescent Education (1976), and the Carnegie Council on Policy Studies in Higher Education (1979). With only slight variation

in their major conclusions, these groups argue for increasing the exposure of teenagers to the world of work through a variety of policies and programs to facilitate the transition to adulthood. This is meant not only to ease the difficulties in the labor market experienced during adolescence, but also to provide all youth with the experience, coping skills, attitudes, and orientation necessary for integration into the world of work. In this respect it is just as important to pay attention to youth in schools (the majority of teenagers) as to those teenagers who have already left school. Indeed, recent research indicates that "holding a job while in school does result in reduced post-school rates of joblessness for teenage young men and young women who do not later attend college" (Stephenson 1980, p. 30).

In fact, the behavior of youth still in school seems to have anticipated the arguments presented in recent reports. While participation in the labor force of adult and out-of-school males did not change over the past twenty years, participation rates of 16- to 19-year-old males in school increased by one-third (figure 1.2 and table 1.1). Between 1960 and 1977, females in school increased their participation in the labor force at a faster rate than females out of school.

Although recent trends show increasing work activity among youth, it is important to question the meaning of this behavior vis-à-vis the broader labor market and the appropriateness of utilizing the labor force framework in the case of high school students. This framework, developed in the late 1930s, is focused on the primary labor force in an attempt to approximate the measurement of supply and demand of labor. Unemployment, then, measures the disparity between the number of jobs available and the number of persons seeking to fill those jobs at a

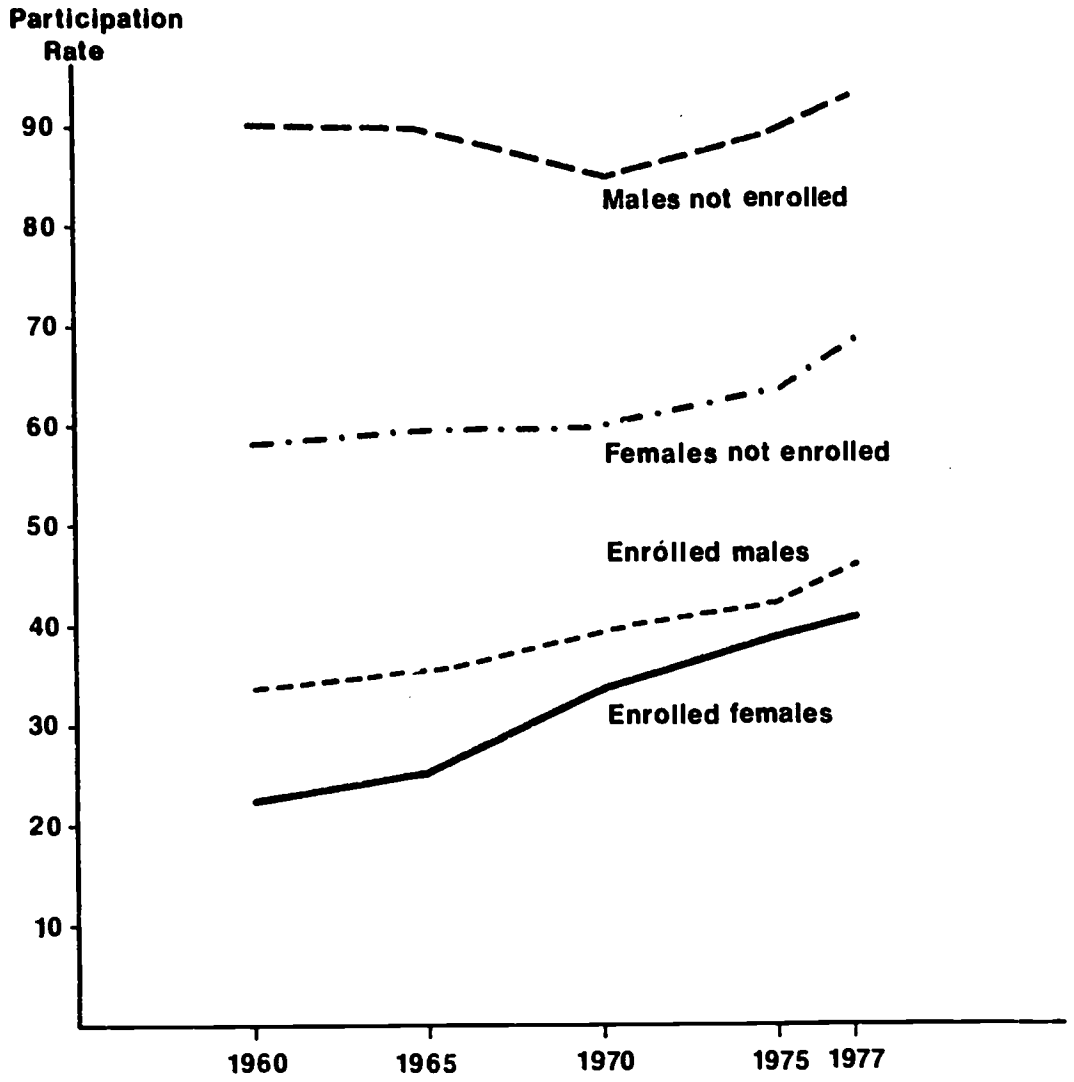

Fig. 1.2. Labor force participation rates of 16- to 19-year olds, by sex and school enrollment: 1960 to 1977.

given time. But unemployment is also a measure of social and economic hardship. Applied to primary workers--traditionally, males in their 30s and 40s--unemployment implies economic difficulty, lack of ability to support a family, possible disruption of family order, and negative effects on self-esteem. The labor force perspective has also typically assumed strong attachment to the labor market and strong commitment as measured by time spent at work.

TABLE 1.1

LABOR FORCE PARTICIPATION RATES AND UNEMPLOYMENT F
14- TO 19- YEAR-OLDS, BY SCHOOL ENROLLMENT STA
AGE, AND SEX: 1960-1977

Sex and age	Enrolled					N	
	1960	1965	1970	1975	1977	1960	1965
	Labor Force Participation Rates						
Males							
14-15 yrs. old ..	20.1	19.7	17.6	17.7	20.5	*	*
16-17 yrs. old ..	34.0	37.2	38.9	41.7	45.6	81.8	81.4
18-19 yrs. old ..	34.9	36.2	41.2	42.0	46.6	92.8	91.2
Females							
14-15 yrs. old ..	12.2	11.9	14.9	15.0	17.5	*	*
16-17 yrs. old ..	22.6	26.0	33.5	38.9	39.1	50.8	42.9
18-19 yrs. old ..	27.9	29.0	37.7	41.1	45.6	60.3	63.3
	Unemployment Rates						
Males							
14-15 yrs. old ..	3.3	6.0	10.9	12.5	19.5	*	*
16-17 yrs. old ..	11.0	12.2	16.5	17.4	15.6	18.3	16.4
18-19 yrs. old ..	10.5	12.3	15.3	14.1	13.3	16.5	10.4
Females							
14-15 yrs. old ..	3.0	1.7	7.3	12.8	13.9	*	*
16-17 yrs. old ..	9.5	8.6	15.9	19.2	17.5	19.0	23.7
18-19 yrs. old ..	6.2	9.4	13.9	15.7	15.3	13.0	13.7

SOURCE: Employment and Training Report of the President, and B-7.

Teenagers are expected by society to be in school. They are not expected to participate extensively in the labor force. In fact, the U.S. is unique among industrial nations in the prevalence of work among its high school students. Nevertheless, it has been argued that this work is sufficiently different from adult work that high school youth should not be considered part of the nation's labor force. In fact, the National Commission on Employment and Unemployment Statistics (1979) has considered the possibility of redefining the labor force in a way that would exclude 16- to 17-year-olds, or, alternatively, eliminate all students 16 to 21 on the basis that their major activity is school attendance. While the final recommendation was to keep the current definition unchanged, the discussion exemplified some of the perceived ambiguity of the labor force concept when applied to youth.

The applicability of the labor force model for high school youth can be viewed as a broad policy issue to be discussed in this report. To a certain extent, though, research has no bearing on this question; it is a matter of personal preference and convenience. In addition, some questions related to the applicability of the labor force concept cannot be addressed in the present report, given the cross-sectional nature of the data that now exists. In the long run, however, issues concerning the meaning of work for youth, the consequences of work during high school for the educational and occupational future of students, and the impact of unemployment at such an early age can all be addressed, reflecting on work as part of the adolescent experience.

In the meantime, some questions can and will be addressed in this report. Chapter 2 focuses on the labor force statistics of high school students in 1980. In conjunction with other data sources, this

is intended as a basic assessment of students' involvement in the labor force and variation among certain population groups. It provides information on the prevalence of work activity and unemployment among high school students.

Chapter 3 discusses the amount of time students spend at work and the wages they earn. If students work only a trivial number of hours a week it may be argued that the labor force perspective, which is based on a full-time effort, is inappropriate. This issue is discussed, as are some relationships between work and other activities typical for youth. Hourly wages and reservation wages of high school youth and comparisons between groups are also presented in this chapter. Particular attention is given to their possible relationship to employment status and minimum wage regulations.

The jobs held by high school students are discussed in chapter 4, where particular attention is paid to the distinction between the "typical" teenage jobs and other kinds of jobs.

Chapter 5 is devoted to government-sponsored work and training programs available to in-school youth. The issues addressed in this chapter concern the population composition of these programs and the short-run outcomes of public-sponsored jobs.

In all, this report should constitute a step toward an understanding of the work activity of high school youth and should stimulate further interest in this area, particularly in its relationship to educational performance and future outcomes.

CHAPTER 2

EMPLOYMENT STATUS OF HIGH SCHOOL STUDENTS

2.1. Employment Status Indicators

A large number of adolescents work while still in high school. Participants in the present survey were asked whether they worked or looked for work during the week prior to survey day. On the basis of the responses to these questions it is possible to calculate estimates of labor force statistics for the sophomore and senior cohorts.[1]

Two-thirds of the student body represented by this sample participated in the labor force during the week prior to the survey (table 2.1). These figures include both students who worked at least one hour for pay and those who were seeking work. Half of all students (51.8 percent to be exact) were employed, and 22.3 percent had sought a job but could not find one and were thus unemployed. Overall a slightly higher proportion of males than females did some work, but virtually no difference was found in their unemployment rates.

Approximately 1.6 million sophomore and senior males and a similar number of females had a job. At the same time close to one million were actively looking for work but could not find any.[2] The age differences are most interesting in this respect. In the population as a whole the labor force participation rate increased from 52.9 percent

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[1]For definitions and the procedures for constructing these variables see appendix A.

[2]These figures are estimates based on sample figures appropriately weighted to reflect the sampling strategy. These procedures are discussed in detail in the codebook for High School and Beyond and in appendix E of this report.

TABLE 2.1

EMPLOYMENT STATUS OF SOPHOMORE AND SENIOR STUDENTS, BY SEX AND AGE: SPRING 1980

	Total Population	Total Partici-pating	Employed	Unemployed	Labor Force Partici-pation Rate	Employment/ Population Ratio	Unemployment Rate
	1	2	3	4	5=2:1	6=3:1	7=4:2
All students ...	6,365,693	4,244,534	3,297,532	947,002	66.7	51.8	22.3
15 yrs. old	1,758,235	930,503	688,519	241,984	52.9	39.2	26.0
16 yrs. old	1,529,333	969,315	684,694	284,621	63.4	44.8	29.4
17 yrs. old	1,742,347	1,318,169	1,069,521	248,648	75.6	61.4	18.9
18 or 19 yrs. old	1,335,778	1,026,547	854,798	171,749	76.8	64.0	16.7
Males	3,051,156	2,121,073	1,649,529	471,538	69.5	54.1	22.2
15 yrs. old	764,626	416,322	299,936	116,386	54.4	39.2	28.0
16 yrs. old	777.365	521,239	370,251	150,982	67.0	47.6	29.0
17 yrs. old	780,682	609,110	495,675	113,435	78.0	63.5	18.6
18 or 19 yrs. old	728,483	574 402	483,667	90,735	78,8	66.4	15.8
Females	3,314,535	2,123,460	1,647,996	475,464	64.1	49.7	22.4
15 yrs. old	993,609	514,181	388,583	125,598	51.7	39.1	24.4
16 yrs. old	751,967	448,075	314,436	133,639	59.6	41.8	29.8
17 yrs. old	961,665	709,059	573,846	135,213	73.7	59.7	19.1
18 or 19 yrs. old	607,294	452,145	371,131	81,014	74.4	61.1	17.9

for 15-year-olds to 76.8 percent for students 18 and 19 years old (about 95 percent of this group was 18 years old). Only two-fifths of the students in the youngest age group were employed, as compared to almost two-thirds of the oldest students. Similar differences remain for both females and males. In part, this reflects the differential position of the age cohorts vis-à-vis society, with older students preparing to leave school and enter the adult world. But the differences also result from age-related restrictions, which is clear from the employment statistics of the 15- and 16-year-olds. Persons at these ages are at similar stages in the education process, and they face similar school requirements. Yet fewer 15-year-olds participate in the labor force. Regulations governing the age at which teenagers may be hired for certain jobs, and possibly parental preference, prohibit work at such a young age. As for the older students, the difference in age between being 17 and 18 years old seems to have little effect on employment situation.

With respect to unemployment, the cohort comparison is of interest because unemployment rates are significantly lower for older students than they are for younger ones. Since these rates were measured at the same time they do not reflect any variation in the performance of the labor market, but rather the importance of age vis-a-vis work possibilities and interest in work. Senior students are not only older, and therefore possibly more acceptable to employers, they might also be more determined in their job search, and more knowledgeable about finding employment.[1]

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[1]In the past, unemployment figures received the greatest attention in the literature on youth. These rates will be presented and discussed when appropriate, in this report, but the emphasis in the discussion

The comparison of age groups is slightly marred by the absence of the freshman and junior classes from the sample of high school students. As a result the students of a given age in the sample are not truly representative of the entire in-school population of that age group. In order to avoid any difficulties of interpretation I discuss cohorts in terms of high school grades rather than age. Since it appears that cohort differences are quite significant, this report distinguishes between sophomore and senior students throughout.

2.2. Personal Characteristics

Table 2.2 presents employment statistics for males and females in the sophomore and senior cohorts. Not surprisingly the relationship of these statistics to high school grade mirrors the findings reported earlier for age groups. The sophomore cohort, comprosed primarily of 15- and 16-year-olds, has a mean age of about 15.5 years, and the mean age for seniors is 17.5 years. The employment/population ratio was 50 percent higher for seniors than for sophomores, implying widespread work activity prior to completion of high school. Sophomores experience higher unemployment rates, as was discussed earlier with respect to

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will lean more towards the employment population ratio, which measures the proportion of the population group actually employed. This measure is somewhat preferable since it is a "hard" measure based on a very specific activity. Unemployment, in contrast, leaves some room for ambiguity in the definition of what constitutes "seeking a job," which is a necessary condition for the unemployment classification. Conceptually I prefer the employment population ratio for two reasons: First, even when unemployment is measured accurately, it is not clear what that means for a high school youth, who is supported in most cases by parents, and who is engaged in a socially accepted alternative activity. Second, we are primarily interested here in how work fits or does not fit into the adolescent world. On the basis of previous research that linked work activity with greater knowledge of the world of work and smoother transition to adulthood, it seems appropriate to ask whether or not the person experienced work activity during adolescence.

TABLE 2.2

EMPLOYMENT STATUS OF SOPHOMORE AND SENIOR STUDENTS, BY COHORT AND SEX: SPRING 1980

	Total Population	Total Partici-pating	Employed	Unemployed	Labor Force Partici-pation Rate	Employment/ Population Ratio	Unemployment Rate
	1	2	3	4	5=2:1	6=3:1	6=4:2
Sophomores	3,512,055	2,058,841	1,479,750	579,091	58.6	42.1	28.1
Males	1 677,206	1,040,484	742,595	297,889	62 0	44.3	28.6
Females	1,819,599	1,007,134	729,766	277,368	55.3	40.0	27.5
Seniors	2,924,034	2,227,933	1,847,634	380,299	76.2	63.2	17.1
Males	1,404,098	1,099,209	920,028	179,181	78.3	65.5	16.3
Females	1,519,936	1,128,724	927,606	201,118	74.3	61.1	17.8

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age differences. In addition to the greater maturity of seniors and possibly greater commitment to seeking work, which may account for differences in unemployment rates, it should also be noted that seniors are more likely to be eligible for work experience provided by the school such as work study programs. This would tend both to increase their employment/population ratio and possibly to reduce their unemployment rates. The extent of participation in work programs will be discussed in a later section.

Female students were not as likely as males to be in the labor force. Females also began their work experience later than did their male peers, as reflected in the relative rates in the sophomore and senior cohorts. The ratio of labor force partcipation of sophomore females to that of sophomore males was 0.89. It increased to 0.95 in the senior year. Thus, toward the end of high school, females were almost as likely as males to be either working or seeking work.

Overall, these figures reflect the remarkable fact that over half the persons represented by this survey were engaged in work activity in addition to their schooling. These estimates of labor force statistics are much higher than the figures presented in table 1.1 for the years 1960-1977. The trend toward increased labor force participation can account for only a fraction of the difference. There remains, therefore, a large discrepancy between the results of this survey and figures published by the Bureau of Labor Statistics.

In searching for a possible explanation for these differences I considered the timing of data collection. In the Current Population Survey (CPS), on which most official statistics are based, all persons interviewed are asked about one specific week so that all the information

gathered relates to a known point in time. In the present study, information was collected over a three-month period, and the labor force data refer to the week prior to the time that data was collected. In appendix B labor force statistics are presented for sophomores and seniors by the month in which they were collected. While some variation exists by month of survey, particularly in the sophomore cohort, these differences are not very large, and in any case they provide an estimate of the boundaries for a timing effect.

A second and more important difference is that in the CPS the respondents are typically heads of household or their spouses, which led me to consider the possibility that parents do report their children's employment situation accurately. Parents may not even be aware of their child's work (or job search) activity, particularly if it is part-time and sporadic. It is therefore possible that labor force statistics on youth that are based on parental responses systematically underestimate the behavior of youth in this area.[1] A comparison with other studies in which youth participated is needed in order to assess the extent to which such an explanation is feasible. If other studies in which youth were directly approached indicate much lower labor force activity than suggested in tables 2.1 and 2.2, then the procedures and findings presented here must be questioned. If, however, other youth studies show similar results, this would lend some support to the argument that the labor force activity of high school youth is more widespread than is generally acknowledged.

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[1]For a more comprehensive discussion of such differences, based on the national longitudinal studies of the late 1960s, see Freeman and Medoff (19).

Students who participated in the NCES National Longitudinal Study of the high school class of 1972 were not asked about their work activity during a particular week, so comparisions with that cohort are not possible. But the recently published results of the first wave the National Longitudinal Survey of Labor Force Behavior, Youth Cohort, a survey conducted for the Department of Labor in 1979, provide a useful reference point for evaluating the validity of these data (Borus et al. 1980).

In the Department of Labor study, as in the present one, youth were personally asked to provide information about themselves. However, in the DoL/NLS, personal interviews were used, whereas questionnaires were group administered in the High School and Beyond study. Estimates of employment/population ratios and unemployment rates in 1979 were consistently higher in the survey of youth than the figures derived from CPS data. This is particularly true for youth who listed school as their major activity. The figures from the DoL/NLS (for 1979) are only roughly comparable to our data because of the use of representative age groups in the former as opposed to school grades in the latter. In 1979, 42.2 percent of all females 16 to 17 years old who were enrolled in school and 44.6 percent of in-school males of the same age were employed (Borus et al. 1980, table 2.4) The present study found, for females, that 41.8 percent of the 16 year olds and 59.7 percent of the 17 year olds were employed (see table 2.1) and, for males, that 47.6 percent and 63.5 percent of 16- and 17-year-olds, respectively, were employed. Although it should be emphasized again that school grade is the more appropriate classification of the High School and Beyond data, it seems likely that the present estimates are higher than those

obtained from the study of labor force behavior. This is particularly true in the case of males, where the figures for the 16-year-olds and the 17-year-olds in the High School and Beyond sample are both higher than the estimate for 16- to 17-year-olds in the earlier study.

The findings regarding unemployment are more compatible. In 1979, 28.5 percent of the 16- to 17-year-old females enrolled in school were unemployed. In the present study the figure is 29.8 percent for 16-year-old and 19.1 percent for 17-year-old females. Males 16 to 17 years old had an unemployment rate of 28.0 percent in 1979. The unemployment rate for males, as estimated from the High School and Beyond data, is 29.0 percent for 16-year-olds and 18.6 percent for 17-year-olds.

This comparison raises the possibility that there is some degree of overreporting of employment and underreporting of unemployment among students participating in the present survey as compared to those in the 1979 study. Yet both surveys place the labor force activity of high school students at a substantially higher level than that estimated from the Current Population Survey. (The present study, when analyzing each age group separately, also seems to capture a dramatic change in labor statistics that occurs between the ages of 16 and 17.)

This approximate comparability of estimates from two different surveys should serve to increase the confidence in the results, and at the same time point to the fact that the Current Population Survey, which is not oriented toward youth, probably underestimates the labor force activity of youth, particularly those in school. More teenagers are in the labor force and a higher percentage of those in the labor force are unemployed than has been assumed in the past.

TABLE 2.3

EMPLOYMENT STATUS OF SOPHOMORE AND SENIOR STUDENTS, BY ETHNICITY

	Total Population	Total Partici-pating	Employed	Unemployed	Labor Fo Partic pation R
	1	2	3	4	5=2:1
			Sophomores		
Blacks	359,887	193,534	102,328	91,206	53.8
Males	160,428	94,083	53,196	40,887	58.6
Females	196,111	96,783	48,042	48,741	49.4
Hispanics	253,714	143,583	90,061	53,522	56.6
Males	123,001	79,888	53,466	26,422	64.9
Females	127,342	61,527	35,468	26,059	48.3
White + Other .	2,345,642	1,384,104	1,041,278	342,826	59.0
Males	1,117,216	686,523	504,057	182,466	61.4
Females	1,222,516	693,259	533,593	159,666	56.7
			Seniors		
Blacks	269,068	189,139	131,054	58,085	70.3
Males	117,185	86,715	62,972	23,743	74.0
Females	151,883	102,424	68,082	34,342	67.4
Hispanics	174,362	131,033	104,365	26,668	75.1
Males	88,471	69,620	56,153	13,467	78.7
Females	85,891	61,413	48,212	13,201	71.5
White + Other .	2,093,410	1,606,580	1,365,832	240,748	76.7
Males	1,000,735	784,196	669,988	114,208	78.4
Females	1,092,676	822,383	695,843	126,540	75.3

Much of the interest in the employment situation of youth has focused on racial and ethnic differences. The growing gap in unemployment rates of black and white teenagers is often singled out as the central issue of concern among recent trends, and the lack of work experience associated with lower employment ratios among blacks is blamed for their greater difficulties in transition to adulthood. Figures presented here (table 2.3) are for three major groups: teenagers of Hispanic origin, blacks, and all other youth--mostly non-Hispanic whites (this group is referred to as whites in all of the following discussions). The figures generally present a familiar pattern, with whites exhibiting the highest participation rates--59 percent for sophomores and 77 percent for seniors. Black teenagers are less likely than other youth to be in the labor force. Female students are consistently less active than males in the labor force, but the ratio of female to male participation rates varies among ethnic groups. The smallest difference between gender groups is found among whites, and the largest among Hispanics. In particular, Hispanic sophomore females are least likely of all groups to be in the labor force, and Hispanic senior males had higher participation rates than any other group of students. Over three-quarters of the latter were either working or seeking work during the week prior to the survey. Thus, race, sex, and high school class interact to provide a complex pattern of labor force activity among students.

If it is assumed that the experience derived from employment during adolescence is an important contact with the adult world, then attention should be focused on the fact that relatively few black youth have work experience while in high school. During the week of the survey, less than one-third of the black sophomores (28.5 percent) were employed,

as compared to 44 percent of the whites, and less than 50 percent of the black seniors were employed at a time when two-thirds of the white seniors were. Hispanic youth were better off in this respect than blacks.

Another way of studying the work experience acquired by youth is to look at the proportion of those who have worked at any time during the school year rather than at the specific time of the survey. The high turnover of youth in the labor force suggests that the proportion employed sometime during the year would be much higher than the proportion working at the time of the survey. The data available allow calculation of the proportion of students who have worked sometime during each of the last three high school grades. We can then look at the progression of a number of groups through the years (table 2.4). For most sex and ethnic groups there is a large increase in the incidence of employment between the sophomore and junior years (experience in junior year as reported by the seniors surveyed). As will be discussed in a later section, the exception is white sophomore females, among whom babysitting is very common. The changes between the junior and senior years are not as dramatic as those between sophomore and junior. This may, in part, be an artifact of the data since the students were only about three-quarters through the senior year at the time of the survey. The figures may also reflect the stabilization that occurs toward the end of high school. In fact, in the case of black and Hispanic males, there seems to be a slight drop in the reported number of students employed between the junior and senior years.

Summer jobs, at least between the eleventh and twelfth grade, are extremely common among all students. The proportion working during

TABLE 2.4

PROPORTION OF STUDENTS EMPLOYED, BY SEX, ETHNIC GROUP AND PERIOD OF EMPLOYMENT: SPRING 1980

Proportion Employed During Period	Males			Females		
	Black	Hispanic	White	Black	Hispanic	White
Sophomore year .	46.6	52.8	64.6	34.3	33.5	66.7
Junior year	69.1	75.6	77.0	52.7	53.9	67.6
(Summer between[a] Junior and Senior year ..	(82.0)	(87.0)	(90.1)	(65.9)	(69.2)	(79.7)
Senior year	64.4	72.2	79.3	54.4	63.1	76.6

[a]Based on retrospective answers of senior students concerning employment during this period.

the summer, as compared with the school year, is particularly high among minority groups, possibly as a result of the numerous summer job programs that focus on this population. Finally, there remains disparity in employment ratios between white youth still in school and black or Hispanic youth, regardless of the way and the grade in which employment is measured.

With respect to unemployment, whites of both sexes have the lowest rates, followed by Hispanics and blacks, in that order (table 2.3). The rates are particularly high for sophomores of all ethnic groups, reaching 50 percent in the case of black females. These figures are consistent with the many studies that describe blacks as the youth with the greatest labor force difficulties.

Family income and its relationship to work are particularly important to consider in the case of teenage students, who are, for the most part, economically dependent on their parents. Arguments in the economic literature about income effects suggest that as family income increases the labor force participation rates of teenagers decline. Higher family income reduces the need to work in order to support the family. This makes it possible for teenagers still in school to devote their time to study and delay entry into the labor force. The rates of participation for students from families with different annual incomes (as reported by the students), presented in table 2.5, support this line of reasoning only at the extreme upper income levels. Sophomores from families with annual incomes of $38,000 or more have a labor force participation rate of 55.1 percent, lower than any other income group. Seniors with the highest family income also have lower participation rates than all other seniors, except for students from families with the lowest income.

In general both the labor force participation rate and the employment/population ratio actually increase slightly as income rises, until they peak in the range of $20,000 to $25,000 ($25,000 to $37,999 in the case of employment/ratio for seniors. The data indicate that it is middle-class students who are most likely to be employed, and the income effect (if it exists) is obscured by other effects also related to income level. It is likely, for example, that many teenagers rely on their parents and family contacts for finding jobs, and middle-income parents probably have better and more extensive contacts of this kind. Middle-income families also tend to live in areas where there are greater possibilities for jobs for teenagers, as is the case in

TABLE 2.5

EMPLOYMENT STATUS OF SOPHOMORE AND SENIOR STUDENTS BY FAMILY INCOME: SPRING 1980

Family Income	Total Population	Labor Force Participation Rate	Employment/ Population Ratio	Unemployment Rate
		Sophomores		
Less than $ 7,000 ..	241,768	59.2	36.7	38.0
$ 7,000 to $11,999 .	390,316	58.0	39.4	32.0
$12,000 to $15,999 .	544,482	59.6	41.8	29.8
$16,000 to $19,999 .	608,867	57.7	43.1	25.3
$20,000 to $24,999 .	564,458	60.4	44.5	26.3
$25,000 to $37,999 .	426,144	58.6	43.9	25.1
$38,000 or more	349,594	55.1	41.5	24.6
		Seniors		
Less than $ 7,000 ..	176,101	72.5	55.9	22.9
$ 7,000 to $11,999 .	299,115	75.3	60.5	19.7
$12,000 to $15,999 .	424,592	77.4	63.2	18.3
$16,000 to $19,999 .	477,733	77.9	64.9	16.7
$20,000 to $24,999 .	487,191	77.8	64.7	16.9
$25,000 to $37,999 .	442,663	76.6	65.5	14.5
$38,000 or more	366,309	73.6	62.7	14.8

the suburbs. Finally, it may be that middle-income parents are more likely to believe that early labor force experience is important and even necessary for future success. All these factors would tend to increase the labor force participation of youth from families of high social standing and decrease their rate of unemployment. In fact,

though this line of reasoning is weakly supported by the data, it appears that family income has relatively little effect on labor force participation rates. There is only a five-point difference between the high and low participation rates of income groups, but greater differences in the employment/population ratios. This ratio is clearly lowest for those whose parents earn less than $7,000 a year--up to 10 percentage points lower than the highest employment/population ratio. The differences that exist, therefore, imply that an income effect may be dominant at the higher levels of the income scale and that other factors that tend to increase participation are dominant at the middle-income levels.

The figures for unemployment are similarly striking in their relationship to income. There is a sharp decline in the percentage of students who are unemployed as income increases. In both cohorts the unemployment rate for students from families with annual earnings of $38,000 or more is slightly less than two-thirds the magnitude of the rate for students in the lowest income group. It is also clear from the table that the labor force difficulties of high school students are particularly acute for those in the lowest 20 percent of the income scale (students from families with annual incomes of less than $12,000).

Earlier, the labor force status of students from different ethnic backgrounds was described. Since the average income varies considerably among ethnic groups, it is worth examining participation and unemployment rates as they relate to family income separately for each of the ethnic groups. Figures 2.1 and 2.2 show the employment/population ratio at different income levels. Black students, both sophomores and seniors, have much lower employment ratios than Hispanic and white students at all income levels (with the exception of seniors from high-income families).

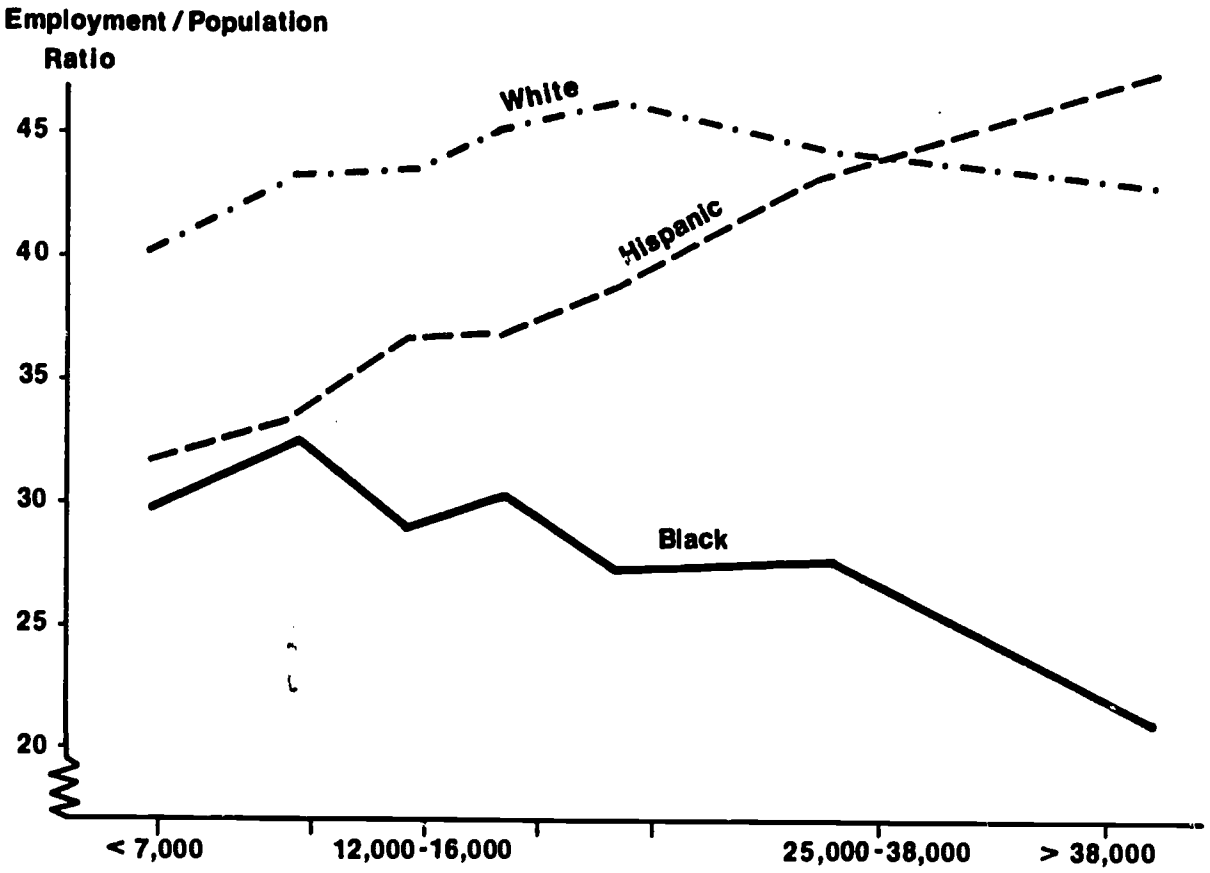

Fig. 2.1. The employment/population ratio of sophomores, by ethnicity and family income: Spring 1980.

Of greater interest is the fact that the pattern of relationship between income and the proportion employed is different for each of the ethnic groups. The ratios for whites fluctuate the least, and there is very little change with income in the likelihood of being employed. Overall there seems to be a weak curvilinear relationship between income and participation. The ratio for black students tends to be inversely related to family income for sophomores and positively related for seniors. Black sophomores from high-income families have an employment

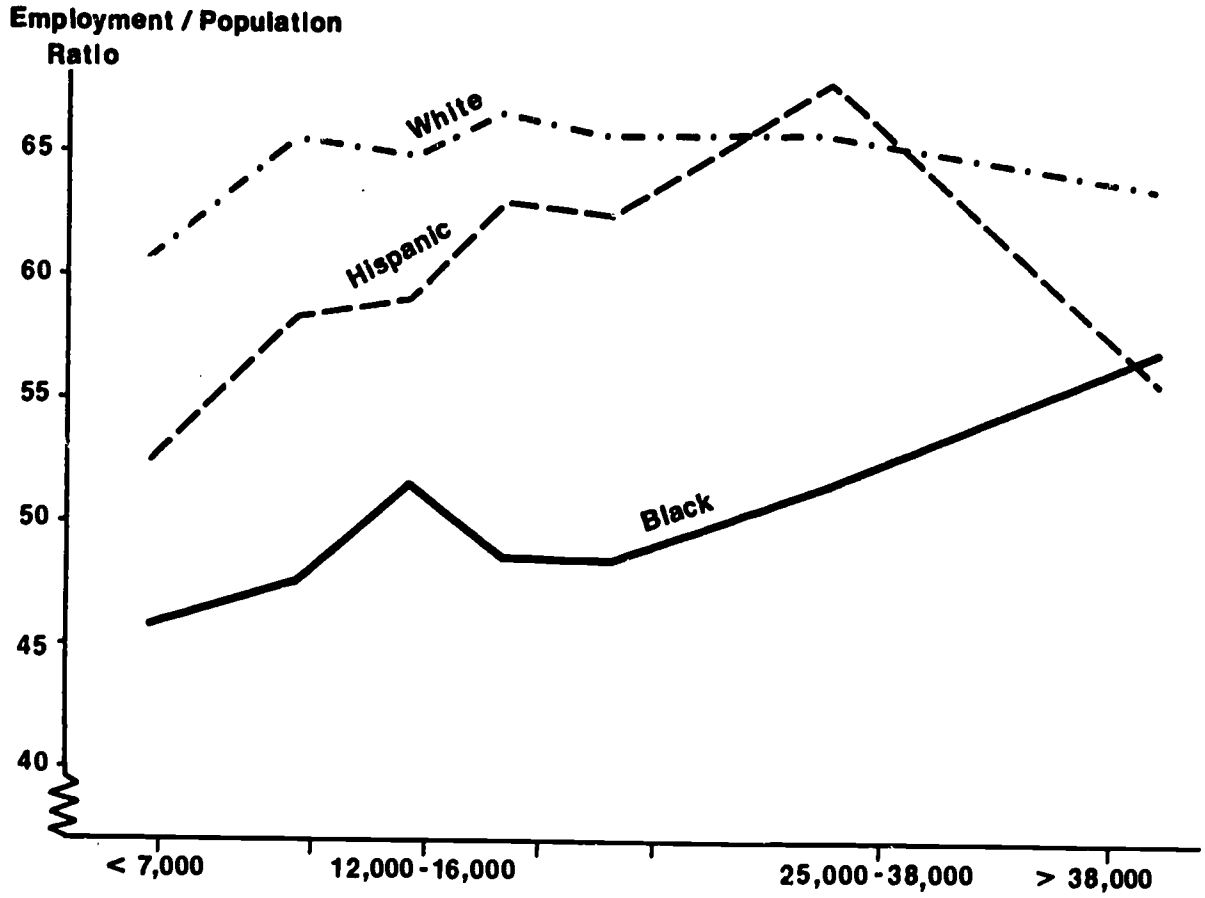

Fig. 2.2. The employment/population ratio of seniors, by ethnicity and family income: Spring 1980.

ratio that is about ten points lower than the rates for low-income blacks. Hispanics, in contrast, seem to have an employment ratio that increases with family income. This is true for both the sophomore and senior cohorts, with the exception of Hispanic seniors from very high income families. Although the employment/population ratios for the Hispanic students resemble the ratios for white students in the above-average range of family income, the gap increases at the lower income levels, where the Hispanic ratios are more like those of blacks (though

somewhat higher). For minority senior students as well as Hispanic sophomores it does not appear that employment is related to the economic need of the student's family, but quite the contrary: students with the greatest economic need are least likely, according to these findings, to be employed.

In general, these low employment/population ratios may result either from lack of interest in work on the part of low-income minority students or from their experiencing greater difficulty in finding jobs (or both).[1] These two alternative explanations can be examined by analyzing the unemployment rates of students in the three ethnic groups with different family incomes.

The patterns of income and unemployment (figures 2.3 and 2.4) once again make it clear that the experience of black students is quite different from that of whites and Hispanics. The figures clearly show that at each income level white youth have the lowest percent unemployed, followed by Hispanics and blacks, in that order. The structure of the relationship between unemployment and income is similar for whites and Hispanics but different for blacks. In the case of white and Hispanic sophomores, unemployment is reduced as income increases, but the rates of black sophomores show no clear pattern. At the senior level, family income has relatively little effect on unemployment rates of white and Hispanic students. There is only a three-point difference in joblessness between low- and high-income whites and a five-point difference for Hispanics. But income exhibits a very strong effect in the case of

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[1] Because of the very large sample size and oversampling of minority students, no subgroup presented in the figures has fewer than 130 sampled cases. Therefore, the patterns that emerged should not be "explained away" as an outcome from a small number of extreme cases.

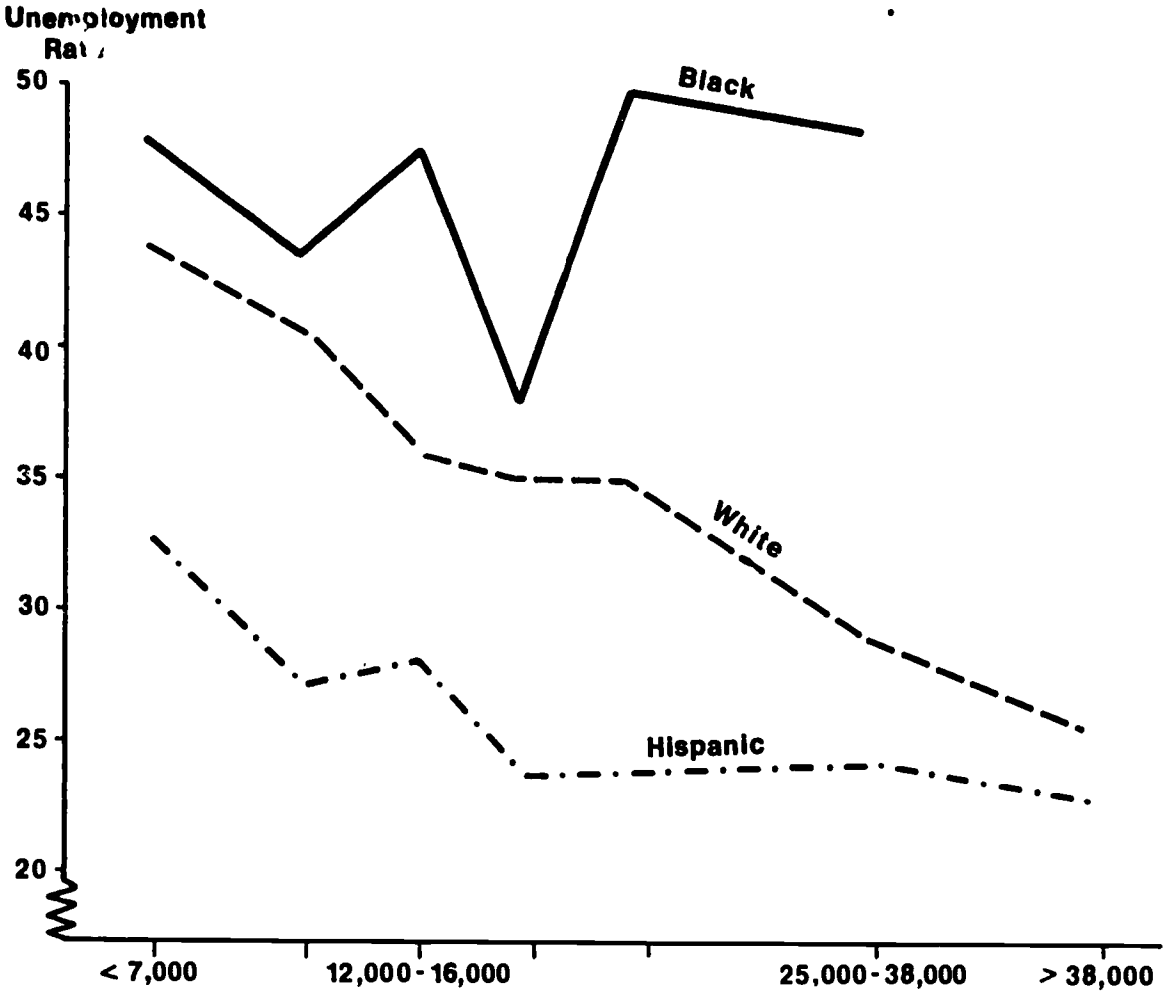

Fig. 2.3. The unemployment rate of sophomores, by ethnicity and family income: Spring 1980.

blacks. Black seniors from families with annual incomes of less than $7,000 a year have an unemployment rate of 35.0 percent. This figure declines to slightly over 13.0 percent for blacks who come from families with the highest income level and is similar to the unemployment rate for white seniors from high-income families.

The sophomore and senior comparison shows a narrowing of differences in unemployment between the white and the Hispanic groups. It

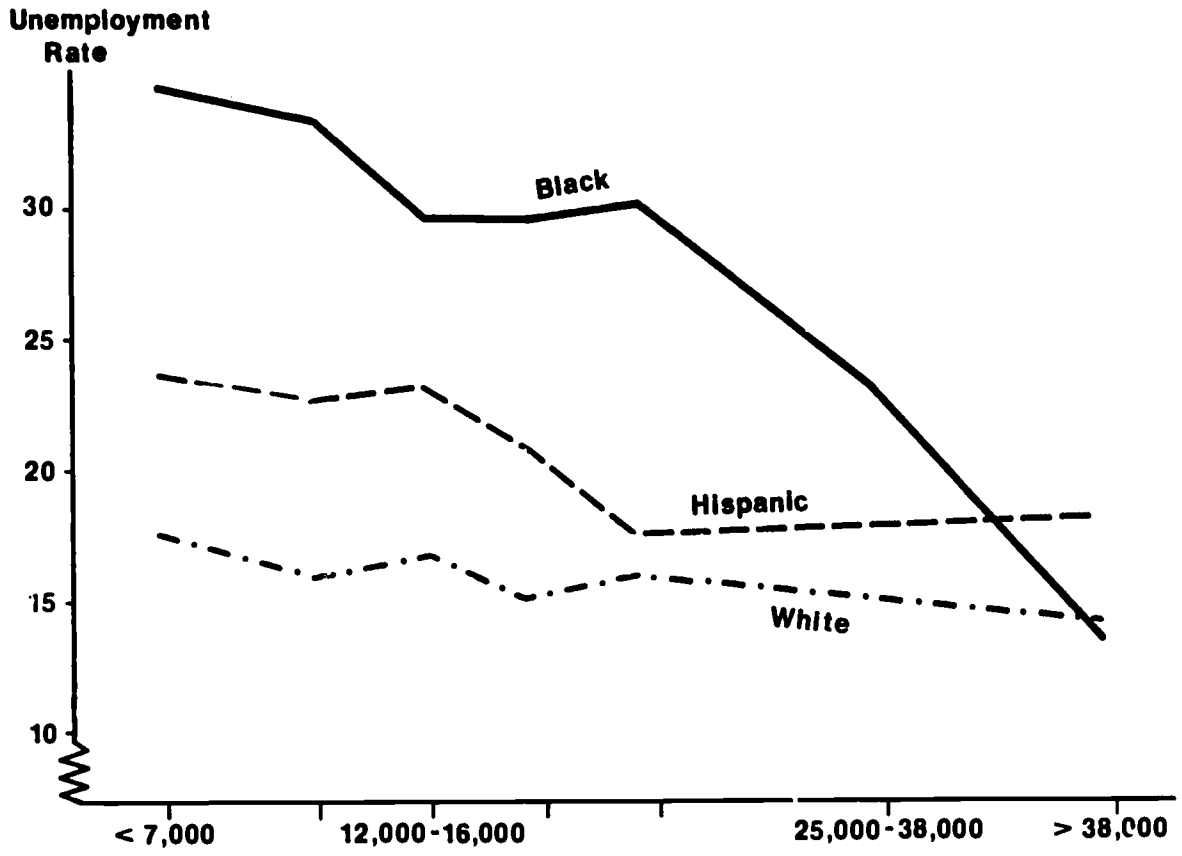

Fig. 2.4. The unemployment rate of seniors, by ethnicity and family income: Spring 1980.

also implies that differences between income levels are reduced within these ethnic groups as youth mature. The situation for blacks is quite different, and only at the upper income levels does the experience of black seniors resemble that of other ethnic groups. Assuming that the unemployment index actually measures an interest in employment that cannot be fulfilled, these findings indicate that the low employment ratios presented earlier for minority students are not due simply to a lack of concern for work. Rather, minorities, and blacks in particular, experience genuine difficulty in obtaining jobs, thus reducing the

proportion of the population group actually employed. The situation is particularly hard for low-income blacks those most likely to need the income. In this respect it is also clear that the labor force perspective is quite meaningful in capturing the need for greater employment among the segment of the population that will benefit most greatly from it. Finally it might be argued that, although ethnicity has become less important than income level (or social status) as a determinant of life chances for upper income blacks, these two factors (race and income) combine to create greater hardship in the labor market for lower income blacks than for any other group of high school students.

2.3. Environmental Characteristics

Participation in the labor force and the state of joblessness, it should be noted, are not simply a function of an individual's interest in work or skills in finding a job. Labor force status is determined, in part, by characteristics of the environment, such as industrial composition and the overall performance of the market. Thus, area of residence may affect the likelihood of working, in addition to a variety of personal characteristics. One way of tapping this effect is through region of the country in which students live. Table 2.6 presents employment/population ratios for nine regions and for each of the three ethnic groups.[1] It is clear that employment varies considerably from region to region, particularly in the sophomore cohort. Sophomores in the Northeast region have an employment/population ratio of 49.1 percent. In the East South Central region, which includes Kentucky, Tennessee, Alabama, and Mississippi, the figure is only 32.0 percent. The differences are not so pronounced

[1] See appendix B for labor force participation rates.

TABLE 2.6

EMPLOYMENT TO POPULATION RATIO, BY COHORT, REGION, AND ETHNICITY: SPRING 1980

Region[a]	Total	Black	Hispanic	White
Sophomores				
Northeast	49.1	37.8	36.2	50.2
Mid Atlantic	39.0	22.7	30.7	43.4
South Atlantic	37.6	30.4	36.0	40.7
East South Central	32.0	25.1	45.4	31.4
West South Central	39.5	29.5	35.1	43.2
East North Central	43.5	30.9	*	45.1
West North Central	48.9	29.4	*	49.6
Mountain	43.8	39.7	37.1	45.6
Pacific	43.7	30.8	37.4	45.9
Seniors				
Northeast	67.0	*	*	67.1
Mid Atlantic	61.2	42.2	59.8	64.0
South Atlantic	61.2	42.2	59.8	64.0
East South Central	56.0	50.1	60.7	57.1
West South Central	60.5	45.2	59.1	64.3
East North Central	67.3	51.4	59.0	69.0
West North Central	68.5	57.9	59.9	68.8
Mountain	63.5	48.7	53.9	66.0
Pacific	63.2	53.3	57.0	64.8

NOTE: Sophomore population = 3,143,744
Senior population = 2,627,925

*Number of cases too small for calculating the ratio.

[a]See appendix A for list of states in each region.

for seniors, but the ordering of the regions according to the likelihood of students' being in the labor force is the same.

One possible explanation for these regional differences is the different population compositions of the regions. In particular, ethnic groups such as Hispanics and blacks are disproportionately distributed among the regions and, since they face a different labor force situation, this may affect the regional statistics. The data presented here do not support this argument, however. Regional differences within each ethnic group are as pronounced as differences for the population as a whole. In the sophomore cohort, regional differences are as high as 8 percentage points, and the difference at the extreme is 10 points for seniors. Looking across columns, it is interesting to note the differences between students from different ethnic groups. White youth generally have higher employment/population ratios, though in most cases the differences are not very large. This is more evident in the senior cohort; for sophomores there is no clear pattern. In some regions Hispanics have higher employment/population ratios than whites. These are mostly regions of high Hispanic concentration, such as the South Atlantic region and the East South Central region.

Employment, in general, was lowest in the southern regions. These regions also posed considerable labor market difficulty (as measured by unemployment rates) to most student population groups. The highest unemployment rate for all students except white sophomores is in the Middle Atlantic states (table 2.7). Hispanics reside mostly in urban areas, where unemployment is generally higher, and therefore the unemployment rates for Hispanics are higher in the Middle and South Atlantic, East North Central, and Pacific regions than they are elsewhere. Finally

TABLE 2.7

UNEMPLOYMENT RATE OF SOPHOMORE AND SENIOR STUDENTS, BY REGION AND ETHNICITY: SPRING 1980

Region[a]	Unemployment Rate			
	Total	Black	Hispanic	White
Sophomores				
Northeast	23.8	51.3	38.4	22.1
Middle Atlantic	31.5	56.9	46.5	25.0
South Atlantic	31.8	42.8	36.7	27.0
East South Central	36.8	52.1	26.7	33.1
West South Central	28.1	42.6	32.9	23.7
East North Central	27.7	48.8	*	24.9
West North Central	22.8	54.6	30.9	21.4
Mountain	27.2	35.6	33.2	25.6
Pacific	27.0	43.2	34.9	24.3
Seniors				
Northeast	16.4	*	*	15.4
Middle Atlantic	20.1	36.6	23.0	18.0
South Atlantic	18.8	29.4	15.0	15.2
East South Central	21.4	30.2	18.9	19.6
West South Central	15.5	30.4	17.4	12.1
East North Central	15.5	30.3	23.9	14.0
West North Central	12.1	29.2	21.0	11.1
Mountain	15.6	32.7	21.7	14.0
Pacific	17.6	28.6	22.8	16.2

NOTE: Sophomore population = 3,143,744
Senior population = 2,627,925

*Number of cases too small for calculating the rate.

[a]See appendix A for list of states in each region.

it should be noted that unemployment is considerably lower among white youth than among blacks and Hispanics regardless of region of residence. In the one case where this pattern does not hold--the East South Central region--the change is probably a result of the very small number of Hispanic youth in that region.

Some of the regional differences just discussed follow a line of distinction between industrial and agricultural regions. When discussing youth, and teenagers in particular, this is an important factor since farm jobs have traditionally absorbed much of the younger population that sought work. Also, the limited skills and the interest in part-time jobs that are characteristic of youth make it difficult for them to obtain regular factory or office jobs. Table 2.8 presents employment/

TABLE 2.8

EMPLOYMENT TO POPULATION RATIO OF SOPHOMORES AND SENIORS, BY TYPE OF COMMUNITY AND ETHNICITY: SPRING 1980

Type of Community	Total	Black	Hispanic	White
Sophomores				
Urban	37.3	28.0	30.5	43.9
Suburban	43.4	29.2	38.8	45.3
Rural	42.0	29.4	41.8	43 4
Seniors				
Urban	61.0	48.5	57.4	66.4
Suburban	65.8	51.1	57.9	67.5
Rural	60.2	46.9	66.0	61.2

NOTE: Sophomore population = 3,136,264
Senior population = 2,627,428

population ratios and table 2.9 unemployment rates[1] for the three ethnic groups living in different types of communities.[2]

TABLE 2.9

UNEMPLOYMENT RATE OF SOPHOMORE AND SENIOR STUDENTS, BY TYPE OF COMMUNITY AND ETHNICITY: SPRING 1980

Type of Community	Total	Black	Hispanic	White
Sophomores				
Urban	35.5	51.6	44.3	25.2
Suburban	27.7	46.6	33.6	25.5
Rural	24.8	37.4	27.5	23.5
Seniors				
Urban	20.3	33.7	22.6	15.0
Suburban	15.8	27.9	21.5	14.5
Rural	16.8	28.0	14.6	16.0

NOTE: Sophomore population = 3,136,064
Senior population = 2,627,925

Students living in suburban areas generally fare better than students in other areas, but there are significant deviations from this pattern. Hispanics in rural areas are more likely to be employed than

[1]Labor force participation rates are presented in appendix B.

[2]While this classification is very broad and may include much variation within each category, it is the only one available at this stage of the analysis.

those in other areas. Unemployment rates are lowest for sophomores in the rural areas, lowest for seniors in the suburbs. This is apparently due to the job composition of the two cohorts since factory, office, and service employers are less likely to hire 15- to 16-year-olds than are employers in the agricultural sector. Therefore, sophomores have greater difficulty in urban and suburban areas, where farm and agricultural jobs are not available.

The slightly lower employment ratios of white and black seniors living in rural areas may represent the decline in farm jobs and the absence of replacement low-skill jobs, or they may be a result of the fact that many rural youth work for the family and are not directly remunerated. These individuals are thus not considered part of the labor force, as the term in this study applies to people who have worked at least one hour for pay. With the present data, it is not possible to separate and test these different explanations.

Overall, urban youth face the greatest labor force difficulty, though differences by type of community are greater for minority youth than they are for whites. In all communities whites are 30 percent to 50 percent more likely to be employed than blacks, and there is a ratio of about 1:1.5 for white-to-Hispanic unemployment rates and a ratio of 1:2 for white-to-black unemployment except for rural sophomores). This shows the blacks to be considerably worse off than other youth regardless of place of residence.

Sociodemographic and environmental attributes have been shown to be related to variation in the employment behavior of high school students. Differences between the sophomores and the seniors, and

between males and females were found to be particularly large, though other factors--ethnic group, family background, and geographic location--are important as well.

2.4. School Program

Work, almost by definition, is secondary to school activity for the majority of the individuals represented in this study. Certain education characteristics may, therefore, affect the decision to work or the ability to find a job. Table 2.10 presents the employment statistics of sophomore and senior females and males for the three major high school programs. The three programs are quite different in their educational emphases, with the vocational program most clearly oriented toward preparation for work and in many cases providing specific occupational skills. The college preparatory program is just that--focusing on subject matter that will enable the student to enter and succeed in college. The general program is less distinct, but it generally has a middle-of-the-road orientation. School program, then, is a proxy for attitudes and skills that are helpful in finding a job at this early stage of life.

Vocational students are clearly more likely to be employed, and this is true for all but sophomore females. The differences between the college preparatory and vocational programs are particularly great. Male sophomores in the vocational program have an employment/population ratio of 50.4 percent; males in the college preparatory program have a ratio of 39.2 percent. Differences of this magnitude are found among the seniors as well. The ratio for students in the general program tends to fall somewhere between the other two groups. These findings

TABLE 2.10

EMPLOYMENT STATUS OF SOPHOMORE AND SENIOR STUDENTS, BY SCHOOL PROGRAM AND SEX, SPRING 1980

School Program[a] and Sex	Total in High School Population	Total Partici-pating	Total Employed	Total Unemployed	Labor Force Partici-pation Rate	Employment/ Population Ratio	Unemployment Rate
Sophomores							
General	1,575,994	946,176	670,732	275,444	60.0	42.5	29.1
Males	761,907	487,709	343,390	144,319	64.0	45.1	29.6
Females	807,813	453,537	323,714	129,823	56.1	40.1	28.6
College preparatory ..	1,175,290	635,481	475,293	160,188	54.1	40.5	25.2
Males	533,047	289,721	209,001	80,720	54.4	39.2	27.9
Females	640,003	343,723	264,704	79,019	53.7	41.3	23.0
Vocational	694,007	436,670	307,683	128,987	62.9	44.3	29.5
Males	347,468	240,580	175,429	65,152	69.2	50.4	27.1
Females	340,497	192,524	130,529	61,995	56.5	38.3	32.2
Seniors							
General	1,063,336	809,991	662,151	147,840	76.2	62.2	18.3
Males	525,253	415,311	346,149	69,162	79.1	65.9	16.7
Females	538,083	394,679	316,001	78,678	73.3	58.7	19.9
College Preparatory ..	1,115,415	814,423	675,581	138,842	73.0	60.6	17.0
Males	539,820	397,715	327,733	68,982	73.5	60.7	17.4
Females	575,595	417,708	347,848	69,860	72.6	60.5	16.7
Vocational	702,852	570,626	481,714	88,912	81.2	68.5	15.6
Males	318,676	270,948	232,172	38,776	85.0	72.8	14.3
Females	384,176	299,678	249,542	50,136	78.0	65.0	16.7

[a]See appendix A for the definition of school program used here.

are not surprising, given the orientation to work implied in the vocational tract, and the fact that in many cases vocational education includes work experience organized and required by the school.

For unemployment, the pattern changes between the sophomore and senior cohorts. In the sophomore cohort unemployment is highest among vocational students (29.5 percent) and lowest in the college preparatory program (25.2 percent). But this is due solely to the differences among females. The different position of vocational students, relative to other students, in the two cohorts may reflect a number of different processes. It may be that a disproportionately higher number of students with labor force difficulties drop out of programs between the sophomore and senior years, or that vocational students have acquired the skills that facilitate finding a job. In any event, senior vocational students experience less unemployment than other students.

Because of possible differences in the distribution of students from different social backgrounds in the high school programs, it is important to look at the employment situation of students while controlling separately for ethnic background and family income level. At the senior level, where program differences should have the greatest impact, there is practically no difference, by program, in the unemployment rates of blacks and students from low-income families (tables not presented here). In the case of the white population, vocational students have slightly lower unemployment rates--13.4 percent as compared to 15.2 percent and 16.0 percent for college preparatory and general students respectively. Finally, the differences between programs are particularly large for Hispanic students and students from families with annual incomes

of $20,000 or more. In these two populations the unemployment rate of vocational students was approximately two-thirds as high as that of students in other programs.

Overall, then, the figures imply that, in the short run at least, vocational students are more likely to seek and to find work while still in school than are other students. This is particularly true in the senior year, where the distinction between programs is more pronounced. Obviously, any assessment of the contribution of these programs to work possibilities should also take into account certain long-term consequences that cannot be studied with the High School and Beyond dataset at present.

2.5. Controlled Effects

So far, the correlates of employment and unemployment have been discussed individually, for the most part. Yet factors such as ethnic group, family income, geographic location, and even school program are interrelated in a way that does not always allow simple tabular analysis to bring out the actual net effect of each attribute. By way of summary, I calculated the independent effect of factors discussed earlier (by means of an OLS regression model) on the likelihood of participating in the labor force, being employed, and being unemployed (the regression models along with means and standard deviations of the variables are presented in appendix C). Since I found earlier that sophomore and senior students exhibit markedly different labor force behavior I continue to treat them separately. The models in general do poorly in accounting for variation in labor force participation rates. Previous studies have found school enrollment and marital status to be the most important determinants of work activity, and it should be noted that the population under study is homogeneous in these two respects.

Tables 2.11 and 2.12 show that some differences among population groups remain after background characteristics and geographic location are statistically controlled. Differences among ethnic groups are particularly large in this respect. Black sophomores have a population/employment ratio that is 13.0 percentage points lower than white sophomores even after differences in family income, type of residential community, and region of residence are taken into account. For seniors the difference is even greater, reaching 15 percentage points. Hispanics also are less likely to be employed, but they are not as different from whites as are blacks. What these figures mean is that at a given age minority

TABLE 2.11

PERCENT DIFFERENCE[a] IN PARTICIPATION RATE, EMPLOYMENT RATIO, AND UNEMPLOYMENT RATE OF SOPHOMORES, FOR ETHNIC, RESIDENTIAL, AND SCHOOL PROGRAM COMPARISONS: SPRING 1980

Labor Force Status	As Compared with Whites		As Compared with Urban Residence		As Compared with the General School Program	
	Black	Hispanic	Rural	Suburban	Vocational	College Preparatory
Labor force participation rate ..	-5.1	-3.9	-2.9	2.3	3.3	-4.1
Employment population ratio	-13.0	-8.5	2.11	3.6	3.2	-2.5
Unemployment rate	17.7	10.8	-7.3	-3.1	-1.3[b]	-2.6

[a]After controlling for age, sex, family income, and region (south or other), based on OLS regression models presented in appendix C.

[b]The coefficient on which this is based is not statistically significant at the 1 percent level.

TABLE 2.12

PERCENT DIFFERENCE[a] IN PARTICIPATION RATE, EMPLOYMENT RATIO, AND UNEMPLOYMENT RATE OF SENIORS, FOR ETHNIC, RESIDENTIAL, AND SCHOOL PROGRAM COMPARISONS: SPRING 1980

Labor Force Status	As Compared with Whites		As Compared with Urban Residence		As Compared with the General School Program	
	Black	Hispanic	Rural	Suburban	Vocational	College Preparatory
Labor force participation rate ..	-6.6	-3.3	-4.6	1.0[b]	5.3	-2.7
Employment/ population ratio	-14.8	-5.4	-2.9	2.2	6.8	-3.1
Unemployment rate	13.7	4.1	-1.4[b]	-1.6	-3.0	-0.2[b]

[a]After controlling for age, sex, family income, and region (south or other), based on OLS regression models presented in appendix C.

[b]The coefficient on which this is based is not statistically significant at the present level.

youth are considerably less likely to benefit from the income and experience associated with work during high school. It is quite clear from the data that this does not result from minority students' choosing not to work. Unemployment rates of blacks are much higher than unemployment rates of white students in each of the cohorts (18 percent higher for sophomores), and this is true for Hispanic sophomores as well. It would appear from these figures that the reason fewer black and Hispanic youth were employed during the time of the survey is that they had greater difficulty in finding jobs.

Differences among residential areas, which serve as a measure of the local labor market, are not as great as differences among ethnic groups, but some interesting patterns should be noted. The suburban community emerges as the most favorable for high school youth. For both cohorts the suburbs offer greater likelihood of employment and less likelihood of unemployment (this is after the population composition of these residential types are controlled in the model). The rural communities have a different effect for seniors than they have for sophomores. Sophomores are more likely to be employed and much less likely to be unemployed in rural areas, but seniors are less likely to have employment in rural areas than in urban areas. This seems to be related to the job structure facing students in these communities. Younger students are more likely to have jobs in agriculture, or odd jobs but are not likely to qualify for factory or office jobs offered in urban communities. Seniors, in contrast, may find many jobs in rural areas less than desirable and at the same time be more qualified for the jobs offered in urban areas.

Students in the vocational program have higher participation rates than students in the general program, and the figures are lower still for students in the college preparatory program. Vocational students are most likely to have a job. In the senior year the differences are particularly high, with a 6.8 percent higher employment/population ratio for vocational students than for students in the general program. Senior vocational students may be better qualified for jobs, they may have stronger interests in obtaining experience, or these differences may represent certain structural differences, such as work and training programs that are more readily available to vocational students. In

any case, their work situation seems different from the situation of other students as indicated by both a higher employment ratio and a lower unemployment rate.

Overall, work during high school emerges as fairly a uniform activity. Earlier tables, as well as the multivariate model, showed relatively little variation across major population groups. This is particularly true when the labor force participation rate is used as a measure of contact with work. Variations are greater in the employment/population ratio and the unemployment rate. What differences do exist show white males, especially those in the vocational program, most likely to be employed. Minority youth and low-income youth (these often overlap) appear to have the greatest difficulty. Inasmuch as work has become part of the adolescent experience, and possibly has some consequences for the individual's future, these students are at a serious disadvantage. The patterns of the employment/population ratio and the unemployment rate seem to imply that the relative absence of work experience in some groups is primarily a result of the difficulties their members confront in the labor market and not simply a matter of choice. In this respect the labor force perspective seems to make sense--it not only allows us to summarize the work experience of youth but also provides some important distinctions that may serve the needs of policy makers.

CHAPTER 3

DIMENSIONS OF WORK: TIME AND WAGES

3.1. Time Spent at Work

Rates of participation in the labor force do not provide a complete picture, and in fact may be quite deceiving, when it comes to the work activity of youth. This is so primarily because of the part-time nature of the jobs held by teenagers still in school. Data collected by the National Longitudinal Surveys of Labor Force Behavior in the late 1960s clearly showed that, in addition to differences in participation rates, hours worked per week differed significantly for 16- to 19-years-olds in and out of school. For instance, white females 16 to 19 years old who were enrolled in school in 1968 had a labor force participation rate of 37.9 percent; the rate was 63.3 for females of that age who were out of school. Further, white females in school worked, on the average, 14 hours a week during survey week, compared with 36 hours a week for females out of school. The difference in time spent in the labor force is thus greater than what might be inferred from participation rates alone. Similar differences were found for other groups (Adams and Magnum 1978, p. 77). It is, therefore, necessary to describe the distribution of hours worked in order to portray completely and accurately the amount of contact high school students have with the labor market.

The distribution of hours worked during the week for students currently employed is presented in table 3.1 for male and female sophomores

and seniors. The largest differences are found between sophomores and seniors. In total, 30.8 percent of the sophomores and only 8.2 percent of the seniors worked less than 5 hours during the week (the reader is reminded that the table includes only students who worked at least one hour a week; all those not working were excluded). In the lowest category, the differences between males and females are considerably greater for sophomores than they are for seniors. At the other extreme, senior males are most likely to have full-time jobs (defined as working 35 hours a week or more). The majority of sophomores--over 80 percent--work less than 22 hours a week, and almost two-thirds of the seniors do the same. Nevertheless, a significant number of teenagers seem to devote a large amount of their time to work activity while still in school, averaging 21 hours a week in the case of senior males.

TABLE 3.1

PERCENTAGE DISTRIBUTIONS OF HOURS WORKED PER WEEK BY STUDENTS CURRENTLY EMPLOYED, BY SEX: SPRING 1980

Hours per Week	Sophomores			Seniors		
	Total	Male	Female	Total	Male	Female
(N)	1,467,920	737,571	722,959	1,838,906	915,813	923,033
Total	100.0	100.0	100.0	100.0	100.0	100.0
1-4	30.8	23.8	38.0	8.2	6.7	9.7
5-14	32.9	30.8	35.1	20.7	18.3	23.0
15-21	17.5	20.5	14.6	32.9	29.2	36.6
22-29	8.4	10.5	6.1	20.4	21.6	19.2
30-34	4.0	5.3	2.6	8.2	10.2	6.3
35 or more . . .	6.4	9.1	3.6	9.6	14.0	5.2
Mean hours work d	12.6	14.8	10.5	19.4	21.1	1[illegible].8

Hours of work also tend to vary by ethnic background and the school program in which the student is enrolled (tables 3.2 and 3.3). Ethnic differences are due partly to the occupational composition of the black teenage population, an issue discussed in a later section. Overall, Hispanic males are most likely to work full-time and have the highest mean hours of work, followed by whites and black males, in that order. Among females, whites spend the least amount of time at work, as measured by the average hours a week. Differences by school program are attributed to varying demands in these programs and the differential importance of present work for future plans. Students who intend to go to college (most likely in a college preparatory program) may not be thinking of full-time work, making contacts, and getting experience for quite some time, whereas others may be preparing for and gaining experience in the work force while still in school.

Time spent at work was not found to vary by other background characteristics, such as family income, parental occupation, or parental education. This is consistent with findings from the NCES National Longitudinal Study of the High School Class of 1972 (Wilms and Hausschfeger 1980, p. 44). Although vocational students do work more hours, the differences by program are not very large, and all seniors except for females in the college preparatory program work around 20 hours a week. In fact, there is a slight tendency for differences among population groups to decrease between the sophomore and senior cohorts, and in any event high school grade seems to be the dominant factor contributing to variation in hours of work.

TABLE 3.2

PERCENTAGE DISTRIBUTIONS OF HOURS WORKED PER WEEK BY SOPHOMORES CURRENTLY EMPLOYED, BY ETHNICITY AND SCHOOL PROGRAM: SPRING 1980

Population group	Hours					
	Total	Working <5 hours	Working 5-21 hours	Working 22-34 hours	Working 35 + hours	Mean hours worked
Ethnic Group						
Blacks	100.0	38.9	39.4	12.5	9.2	12.9
Males . . .	100.0	35.6	38.7	17.0	8.7	13.7
Females . .	100.0	43.1	40.0	7.5	9.4	11.9
Hispanics . .	100.0	25.4	47.4	16.6	10.6	15.4
Males . . .	100.0	20.5	46.0	19.0	14.5	17.2
Females . . .	100.0	32.4	50.0	12.6	5.0	12.4
Whites	100.0	31.0	52.1	11.4	5.5	12.4
Males . . .	100.0	23.0	53.8	14.8	8.4	14.7
Females . .	100.0	38.6	50.5	8.0	2.9	10.2
School Program						
General . . .	100.0	29.2	50.9	13.2	6.7	13.2
Males . . .	100.0	22.6	51.9	16.5	9.0	15.3
Females . .	100.0	36.3	49.9	9.5	4.3	11.1
College Preparatory	100.0	34.2	52.6	9.4	3.8	11.0
Males	100.0	26.2	55.0	12.5	5.9	12.9
Females . .	100.0	40.2	50.9	6.9	2.0	9.4
Vocational . .	100.0	29.1	46.2	15.4	9.3	14.0
Males . . .	100.0	22.6	46.0	18.8	12.6	16.3
Females . .	100.0	38.1	46.6	10.6	4.7	11.0

TABLE 3.3

PERCENTAGE DISTRIBUTIONS OF HOURS WORKED PER WEEK BY SENIORS CURRENTLY EMPLOYED, BY ETHNICITY AND SCHOOL PROGRAM: SPRING 1980

Population group	Hours					
	Total	Working < 5 hours	Working 5-21 hours	Working 22-34 hours	Working 35 + hours	Mean hours worked
Ethnic Group						
Blacks	100.0	12.8	53.2	22.1	11.9	18.7
Males . . .	100.0	10.3	49.3	23.7	16.7	20.4
Females . .	100.0	15.1	56.9	20.6	7.4	17.2
Hispanics . .	100.0	10.0	46.8	29.1	14.1	20.5
Males . . .	100.0	9.4	38.4	33.6	18.6	22.2
Females . .	100.0	10.7	56.6	23.9	8.8	18.5
Whites	100.0	7.6	54.5	29.2	8.7	19.4
Males . . .	100.0	6.2	48.3	32.6	12.9	21.1
Females . .	100.0	9.0	60.5	25.9	4.6	17.9
School Program						
General . . .	100.0	7.8	51.2	30.1	10.9	20.0
Males . . .	100.0	6.4	45.4	33.3	14.9	21.6
Females . .	100.0	9.4	57.6	26.7	6.3	18.4
College Preparatory	100.0	8.9	60.2	25.3	5.6	17.8
Males . . .	100.0	7.4	55.6	28.3	8.7	19.2
Females . .	100.0	10.3	64.4	22.4	2.9	16.6
Vocational . .	100.0	7.4	47.8	31.5	13.3	21.0
Males	100.0	5.7	39.3	34.8	20.2	23.3
Females . . .	100.0	8.9	55.7	28.5	6.9	19.0

It is of interest, at this point, to turn to a comparison of the data collected for High School and Beyond and similar information collected a year earlier in the DoL/NLS study of youth labor force behavior.[1] Table 3.4 gives the distribution of hours worked by sophomores and seniors now in the labor force; the data for 1979 is presented in table 3.5. The similarity of the results is quite striking and should increase our confidence in the quality of the data. According to both datasets, the majority of students in the labor force--approximately two-thirds of females and over half of the males--work less than 20 hours a week. Hispanic males are least likely to work less than 20 hours and are most likely to work full-time; at the other extreme, white females are least likely to work full-time. It is also evident that the disparity between the two tables is greater for minority students. In particular, the 1980 data show more minority males to have full-time jobs. In 1980, the figure was 13.0 percent for black males and 8.3 percent for black females. In 1979, in contrast, more black females than males were found to have full-time jobs (10.6 percent and 8.6 percent respectively).[2]

The findings presented so far all point to the fact that work is an integral part of the adolescent experience. Over half of the in-school teenagers were employed during the survey and those employed spent a considerable number of hours at their jobs. The relationship of work to other activities that are part of a high school student's

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[1] In the earlier study the universe consisted of all high school students. It was therefore necessary to combine the sophomore and senior cohorts for this analysis and to adjust the categories of hours worked in order to make as meaningful a comparison as possible.

[2] These figures are somewhat questionable in light of other findings, such as those from National Longitudinal Studies of the late 1960s, which show black males to work more hours than females.

TABLE 3.4

PERCENTAGE DISTRIBUTIONS OF HOURS WORKED PER WEEK BY SOPHOMORES AND SENIORS EMPLOYED, BY SEX AND ETHNICITY: SPRING 1980

Hours per Week	Female			Male		
	Black	Hispanic	White	Black	Hispanic	White
(N).....	115,610	83,404	1,222,645	115,281	108,943	1,179,634
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
0-19.....	67.3	64.4	68.9	59.0	49.5	54.9
20-34.....	24.4	28.4	27.2	28.0	33.9	33.4
35 or more.....	8.3	7.2	3.9	13.0	16.6	11.7

TABLE 3.5

PERCENTAGE DISTRIBUTIONS OF HOURS WORKED BY HIGH SCHOOL STUDENTS IN 1979, BY SEX AND RACE

Hours per Week	Female			Male		
	Black	Hispanic	White	Black	Hispanic	White
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
0-19.....	61.0	63.5	67.7	57.1	51.6	57.1
20-34.....	28.4	27.4	28.3	34.3	38.6	33.9
35 or more....	10.6	9.1	4.0	8.6	9.7	9.0

SOURCE: Table 3.9 in Michael E. Borus et al., "Youth and the Labor Market - 1979," Center for Human Resources Research, The Ohio State University, 1980.

life is an important question. At the extreme, if we assume that a teenager is under severe time constraints, we might expect that time spent at one activity, such as work, would come at the expense of another undertaking--doing homework or some leisure activity. Tables 3.6 and 3.7 show the number of hours students spend on homework and watching television each week in relation to the time spent at work during the week prior to the survey. The most striking fact about these tables is that there seems to be only a weak relationship. In other words, students who did not work and students who worked 20 hours or more spent approximately the same amount of time on homework and watching television. This is particularly true for sophomores. Male and female sophomores spent approximately the same amount of time on homework per week regardless of the time spent at work (given the minimal amount of time spent doing homework, maybe this should not come as a great surprise). Senior students who work seem to spend somewhat less time doing homework, particularly those who work more than 20 hours a week. In the case of senior males there is a decrease from 4 to 3 hours in the amount of time doing homework. Senior students who work more than 20 hours a week spend about three hours less watching television than do students who do not work at all. This is especially true in the case of white students; in the case of black students the differences are much smaller (see tables B.4 and B.5 in appendix B). Unfortunately these are the only activities for which we have estimates of actual time spent, but it was also found that students who work more than 20 hours a week read slightly less often than students who do not work, and they tend to drive or ride around for pleasure more often. No differences were found with respect

TABLE 3.6

NUMBER OF HOURS SPENT DOING HOMEWORK EACH WEEK, BY NUMBER OF HOURS SPENT AT WORK, SCHOOL GRADE, AND SEX: SPRING 1980

Number of Hours Spent at Work	Sophomores		Seniors	
	Male	Female	Male	Female
None	3.9	4.3	4.1	4.6
1 to 4 hours	3.7	4.7	3.7	4.4
5 to 21 hours	3.6	4.4	3.4	4.3
22 to 34 hours	3.3	4.4	3.0	3.8
35 hours or more	3.5	4.6	3.0	4.2

TABLE 3.7

NUMBER OF HOURS SPENT WATCHING TV EACH WEEK, BY NUMBER OF HOURS SPENT AT WORK, SCHOOL GRADE, AND SEX: SPRING 1980[a]

Number of Hours Spent at Work	Sophomores		Seniors	
	Male	Female	Male	Female
None	18.9	17.4	16.3	17.0
1 to 4 hours	17.8	16.5	14.3	14.8
5 to 21 hours	17.4	16.1	13.9	14.0
22 to 34 hours	16.8	16.5	13.6	13.4
35 hours or more	17.0	16.9	13.3	14.0

[a]These figures were obtained by multiplying the number of hours watching TV during week days by 5. Thus they underestimate total time spent watching TV during the entire week but are appropriate for our discussion of the relationship to hours of work.

to other activities, such as reading the front page of the newspaper, talking with parents, spending time alone, talking with friends on the phone, or visiting with friends (tables not presented).

High school students seem to have an abundance of time at their disposal, so much that even a fairly strong commitment to work does not seriously impinge upon other activities (at least those activities addressed in this study). In fact, one begins to wonder what nonemployed students do with all the time that is not committed to work. Further study along these lines would seem extremely valuable for a better understanding of work as part of the adolescent experience, and the relationship of employment to school activities and educational success. However, these issues are beyond the scope of this report and will have to await future research.

The small differences that do exist between students who work and those who do not are of some interest in the comparison of the sophomore and senior cohorts. Senior male students who worked more than 20 hours a week spent less time on homework and close to 20 percent less time watching television than students who did not work at all. In the case of sophomores there was no difference in amount of time spent on homework and only a small decline in watching television as the time spent at work increased. At the same time senior students who worked many hours tended to read for pleasure less frequently and went out with friends (for a drive, etc.) more frequently. Thus, there seems to be both a departure from school-based activities and a more central role for work among seniors. One possible reason that an increase in the hours of work would have an effect, albeit a small one, for seniors

but not for sophomores has to do with the types of jobs students hold and the greater commitment required in jobs held by seniors. This is elaborated in chapter 4.

The discussion so far has focused on the students who were in the labor force during the week prior to survey day. This approach, congruent with that used by the Bureau of Labor Statistics, has the advantage of anchoring the information in reference to a particular point in time and thus making it more readily interpretable. Another measure of the work behavior of high school youth--hours worked at the last job held during the school year--provides a different perspective. This perspective is particularly useful for estimating the portion of students who do no work at all during the school year.

In the sophomore cohort, over one-third of the white population[1] and over half the blacks did no work during the school year. Less than 15 percent of the sophomore students worked more than 20 hours a week (table 3.8). As students become older and progress through school they are more likely to hold a job, at least for some time during the school year. For all students, male and female, black and non-black, there is a decrease in the proportion of students who do not work during the junior year.[2] There is also a substantial increase in the proportion working more than 20 hours, to about 20 percent for females and over 33 percent for males.

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[1]In this set of tables Hispanic students were combined with all non-blacks in order that a valid comparison could be made with data available for seniors in 1972, where Hispanics were not distinguished from other whites.

[2]This information is based on responses of seniors to a question about the hours they worked during the previous school year. It thus suffers from all of the deficiencies of retrospective data. Also, it is not a true estimate of hours worked by the junior population as a whole, since it is based only on the subpopulation that remained in school through the spring of the senior year.

TABLE 3.8

PERCENTAGE DISTRIBUTIONS OF HOURS WORKED DURING SCHOOL YEAR, BY HIGH SCHOOL GRADE, RACE, AND SEX: SPRING 1980

Hours Worked per Week	White		Black	
	Male	Female	Male	Female
Sophomores				
(N)	1,516,296	1,613,742	160,848	196,534
Total	100.0	100.0	100.0	100.0
None	36.6	35.6	53.3	65.7
1-20	46.4	56.1	35.4	28.8
21-30	8.6	5.0	5.9	2.1
More than 30	8.4	3.3	5.4	3.4
Juniors[a]				
(N)	1,280,557	1,363,186	115,967	149,943
Total	100.0	100.0	100.0	100.0
None	22.7	33.6	30.9	47.3
1-20	42.1	46.0	34.1	31.4
21-30	19.1	13.1	14.0	9.8
More than 30	16.1	7.3	21.0	11.5
Seniors				
(N)	1,283,827	1,362,878	116,470	151,263
Total	100.0	100.0	100.0	100.0
None	21.6	24.9	35.6	45.6
1-20	40.1	49.0	34.9	36.4
21-30	20.8	18.1	14.3	10.3
More than 30	17.5	8.0	15.2	7.7

[a] Based on retrospective information provided by the senior students.

Additional increases in the proportion of students working and the number of hours worked occur during the senior year. But this is true only for the white population. In contrast with white males and females, among blacks there is a peculiar decrease between the junior and senior years in the proportion who work more than 20 hours a week. The proportion of black males who do not work at all during the school year also increases from 30.9 percent in the junior year to 35.6 percent in the senior year. Since the figures in the two grades are for the same individuals, the possibility of a differential dropout effect should be excluded, which leaves two other explanations. It is possible that blacks who remain in school through the senior year decide to reduce their work activity in order to complete school successfully. One hypothesis derived from this line of reasoning would be that black students who reduce their hours of work in the senior year have higher educational aspirations than students who do not. No support for this hypothesis was found in the data. A second explanation has to do with the retrospective nature of the information on hours worked during the junior year. Students may have been inaccurate in their reports or may have included summer vacations as well, though it is not clear why this would be more true for blacks than for non-blacks. While no further investigation of this question is possible at the present stage, the issue deserves attention in order to determine if different patterns of behavior exist for black youth and, if so, under what circumstances this occurs.

Some insight into the trend over time in the number of hours high school students spend at work is made possible by a dataset collected as part of the National Longitudinal Study of the High School Class

of 1972. It appears that males experienced relative stability over the eight-year period (table 3.9). Females, in contrast, went through significant changes. The proportion of white females who did not work during the senior year declined from 30 percent in 1972 to 25 percent in 1980. A much smaller change is noted for black females. The proportion of white females working more than 20 hours a week climbed from 20 percent to 26 percent, though it is still substantially lower than the proportion of males. The societal trend for increased labor force activity among adult females has evidently reached the high schools, and females are coming to resemble males in the amount of time they spend at work, along with a closing of the gap in participation rates, as discussed earlier in this report.

TABLE 3.9

PERCENTAGE DISTRIBUTIONS OF HOURS WORKED DURING SCHOOL YEAR FOR SENIORS IN 1972, BY RACE AND SEX

Hours Worked per Week	White		Black	
	Male	Female	Male	Female
Total.....	100.0	100.0	100.0	100.0
None.....	21.0	30.6	36.5	47.6
1-20.....	43.4	49.1	37.3	37.8
21-30.....	21.0	14.5	13.5	8.8
More than 30.....	14.6	5.8	12.5	5.8

SOURCE: Table 3.11 in David E. Wiley and Annegret Harnischfeger, High School Learning, Vocational Teaching and What Then. Chicago: Cemrel, 1980.

In concluding this section I return to the differences found between the two grade-level cohorts. It is quite clear that teenagers do not wait for the completion of schooling for their work experience to commence. It is also clear that there can be no single dichotomization of students into those who start working early and continue through high school on the one hand and those who do not work at all on the other. Rather the proportion of teenagers who work increases as the group ages, and older students invest considerably more time in the labor force. Obviously, as high school students grow older, more opportunities are available to them, and work may take on greater importance. One factor that seems to facilitate the increase in work during the school year is summer jobs. Controlling for hours worked during the junior year, I found that the more hours one worked during the summer, the more hours one was likely to work in the senior year. Contrary to common beliefs about high school youth entering the labor force in the summer and leaving in the fall, table 3.10 shows that the overwhelming majority of teenagers who worked during the summer prior to their senior year remained in the labor force during the school year. The number of hours worked during the summer is important as well. Acquaintance with the world of work and job contacts made during the summer, when the student has more time and more jobs are available, can be carried into the school year. This establishes summer jobs as an important part of increased contact with the work environment, with an effect beyond the simple function of substituting for learning activity when school is not in session.

TABLE 3.10

CUMULATIVE PERCENTAGE DISTRIBUTION OF HOURS WORKED PER WEEK DURING SCHOOL YEAR, FOR SENIOR STUDENTS, BY HOURS WORKED DURING SUMMER: SPRING 1980[a]

Hours Worked During Summer	No Work	Less than 5 Hours	Less than 15 Hours	Less than 22 Hours	Less than 30 Hours	Less than 35 Hours	Total
None	46.8	57.3	70.1	86.0	94.2	96.9	100.0
1-4	32.3	63.9	78.0	91.1	97.2	98.4	100.0
5-14	24.3	39.5	74.7	90.0	96.1	97.8	100.0
15-21	19.6	25.5	49.5	85.5	96.8	97.8	100.0
22-29	17.6	21.6	37.7	72.4	94.6	97.3	100.0
30-34	19.5	22.5	34.5	60.6	84.1	95.9	100.0
35 or more .	19.7	24.0	36.1	57.6	73.6	82.6	100.0

[a]Senior population = 3,007,335.

3.2. Wages of High School Students

Table 3.11 presents the distribution of hourly wages earned by sophomore and senior students in the labor force at the time of the survey. One-fifth of the sophomores but only 3 percent of the seniors report earning less than $1.50 an hour. Sophomore females in particular are concentrated at the lower boundary of the wage scale. Approximately 60 percent of them earn less than $2.50 an hour. In contrast, only 14 percent of the senior females and 5 percent of the senior males earn that amount or less. The mean wages range from $2.24 for sophomore females to $3.42 for senior males. In each cohort females earn less than their male peers; however, the ratio of senior female-male earnings is 0.91, and the sophomore ratio is only 0.74. As is shown in a later

TABLE 3.11

PERCENTAGE DISTRIBUTIONS OF HOURLY WAGES FOR STUDENTS CURRENTLY EMPLOYED, BY SEX AND GRADE: SPRING 1980

Hourly Wage	Sophomores			Seniors		
	Total	Males	Females	Total	Males	Females
(N)	1,444,268	722,119	711,760	1,820,917	906,427	914,491
Total	100.0	100.0	100.0	100.0	100.0	100.0
Less than $1.50 . .	20.3	6.9	33.9	3.0	1.0	5.0
$1.50-$1.99	10.2	5.8	14.7	2.4	1.1	3.7
$2.00-$2.49	10.0	10.1	9.9	4.0	2.9	5.1
$2.50-$2.89	8.6	10.6	6.8	4.7	3.9	5.6
$2.90-$3.09	11.5	14.5	8.6	9.9	10.0	9.8
$3.10-$3.49	24.3	29.7	18.5	51.0	47.2	54.7
$3.50-$3.99	4.9	6.9	2.8	11.7	14.9	8.6
$4.00 or more . . .	10.2	15.5	4.8	13.3	19.0	7.5
Mean hourly wage .	$2.63	$3.02	$2.24	$3.28	$3.42	$3.13

section, much of this difference is a consequence of sophomore female concentration in low-paying occupational groups, and some of the differences disappear with age.

The distribution of wages by ethnic background (table 3.12) shows far fewer differences than are found for sex and school grade. White students are slightly more likely to be found at the lower end of the wage scale than are blacks and Hispanics. Approximately 43 percent of the white sophomores earn less than $2.50, about one and one-half times the proportion for minority youth. By the senior level these

TABLE 3.12

HOURLY WAGES OF STUDENTS CURRENTLY EMPLOYED, BY ETHNICITY: SPRING 1980

Hourly wage	Sophomores			Seniors		
	Blacks	Hispanics	Whites	Blacks	Hispanics	Whites
(N)	111,553	99,962	1,054,024	139,086	109,222	1,378,075
Total	100.0	100.0	100.0	100.0	100.0	100.0
Less than $1.50 . .	12.1	11.1	22.2	1.8	2.2	3.1
$1.50-$1.99	10.3	7.7	10.6	2.1	1.9	2.5
$2.00-$2.49	9.1	9.0	10.5	3.4	3.2	4.3
$2.50-$2.89	9.0	9.8	8.9	4.7	4.6	4.8
$2.90-$3.09	14.1	15.1	11.0	11.8	11.8	9.3
$3.10-$3.49	30.9	30.5	22.6	56.4	51.8	50.6
$3.50-$3.99	5.1	5.3	4.5	10.3	11.2	11.9
$4.00 or more . . .	9.4	11.5	9.8	9.5	13.3	13.5
Mean hourly wage .	$2.78	$2.89	$2.60	$3.27	$3.31	$3.27

differences all but disappear, as is evident from the average hourly wages for each of the population groups. These findings differ from previous studies of older youth and adults, which consistently show whites to have higher wages than minorities. Apparently, a change during the late teens (as seen in the senior cohort) brings about a reversal in the wage ratio of whites and nonwhites.

One way of evaluating the wages of youth is to see how they compare with minimum wages set by law. At the time of the survey, the

federal minimum wage was $3.10 an hour, and 60 percent of the sophomores and 24 percent of the seniors were earning less. It should be noted, however, that not all workers are covered by minimum wage legislation, and teenagers are among the least likely to be covered because of the types of jobs they hold.

Wages are generally expected to correspond to the workers' skills and familiarity with the tasks required. Therefore, an additional attribute that was expected to have a relationship with wage level was the high school program in which the student was enrolled. It might be argued that the skills taught to vocational students are closely related to tasks on the job and that employers would, therefore, prefer such students and pay them higher wages. Alternatively, it might be argued that, on the average, college preparatory students have higher academic ability and would perform better on the job. In any case there is reason to expect some variation in wage levels by school program. In fact, however, no such relationship was found. When ethnicity and sex are controlled there are no differences in the mean wages for students of different school programs at the sophomore level and only minor differences at the senior level.

Finally, students residing in the western regions of the country tend to have higher wages than students in other parts of the country.

Total earnings are a more useful indicator of the economic significance of employment during school than hourly wage since the majority of students work a relatively small number of hours a week as compared to adults. Weekly earnings for males and females of different ethnic backgrounds were derived by multiplying the mean hourly wage for the group by the mean number of hours worked a week (table 3.13).

TABLE 3.13

ESTIMATED MEAN EARNINGS PER WEEK FOR STUDENTS CURRENTLY EMPLOYED, BY ETHNIC GROUP, SEX, AND GRADE: SPRING 1980

Ethnic Group	Sophomore			Senior		
	Male	Female	Female Adjusted[a]	Male	Female	Female Adjusted[a]
Black . .	43.39	32.25	37.13	68.74	54.70	64.87
Hispanic.	55.13	34.60	47.98	76.81	59.00	70.82
White . .	45.49	24.98	36.01	72.79	57.28	67.52

[a]Estimated weekly earnings based on working the same mean number of hours a week as males in the same ethnic group.

The earnings of senior students range from slightly over $50 to over $75, whereas the earnings of sophomores are $20 to $30 lower. Variations among ethnic groups are due primarily to differences in the time spent at work since blacks, Hispanics, and whites of the same sex and cohort earn very similar hourly wages. Females earn only 55 to 75 percent of the earnings of males in each of the ethnic groups. At the extremes, white sophomore females earned an average of only $25 a week, and white senior females earned more than double that amount. The large differences in weekly earnings between males and females are only partly a result of females' working less hours. Even if females were to work the same mean number of hours a week as males of the same grade and ethnic group (see columns 3 and 6 of table 3.13) a $4 to $9 disparity due solely to differential wages would remain.

Unfortunately, the present dataset includes no information on the way in which income earned by high school students is put to use. Therefore, it is not immediately clear whether the employment of high school students is of any importance in alleviating economic hardship. One way of approaching this issue with the information at hand is to study the role that adolescent earnings play vis-à-vis total family income. Since we have information on hourly wages and the number of hours a week each student worked, we can estimate weekly earnings. If we further assume, as a first approximation, that the student earned a similar amount each week all year round, we can obtain an estimate of a student's annual income from employment by multiplying weekly earnings by 50 (see second column in tables 3.14 and 3.15). The mean annual earnings of students in a particular population group relative to the mean family income[1] in the population group provides a measure of the present economic importance of students' work.

Under the assumption that students work 50 weeks a year, some senior students, particularly minority males, may earn up to 25 percent of the family income they reported. For females and for sophomores annual earnings are lower in absolute amounts and as a proportion of parental income. They are especially low for sophomore females who are white and live in a suburban location (3.8 percent of the mean family income in that population group). These figures quite likely overestimate the annual income of high school students since previous research has shown that the attachment of youth to the labor force is weak and they tend to move in and out of jobs quite frequently. It

[1] Since the mean income is typically higher than the median income for the group we obtain conservative estimates of the proportion of parental income constituted by student earnings.

TABLE 3.14

ESTIMATES OF ANNUAL EARNINGS FOR TEN SUBPOPULATIONS OF SOPHOMORES USING THREE DIFFERENTLY BASED ASSUMPTIONS ABOUT THE NUMBER OF WEEKS EMPLOYED

Population group[a]	Weekly earnings[b] (dollars)	Based on 50 weeks of employment a year		Based on estimates of the number of weeks of employment from the DoL/NLS Study		Estimated under the assumption of being employed the same number of weeks as whites in the DoL/NLS Study	
		Annual earnings	Percent of family income[c]	Annual earnings	Percent of family income[c]	Annual earnings	Percent of family income[c]
Male							
Black urban . . .	46.53	2,326	14.9	740	4.7	1,247	8.0
Black rural . . .	32.30	1,615	12.9	514	4.1	866	6.9
Hispanic urban .	55.92	2,796	16.4	1,157	6.8	1,499	8.8
White suburban .	44.50	2,225	7.0	1,193	3.8	1,193	3.8
White rural . . .	47.30	2,365	11.3	1,258	6.0	1,268	6.0
Female							
Black suburban. .	31.83	1,591	9.2	455	2.6	742	4.3
Black rural . . .	27.62	1,381	10.4	395	3.0	643	4.8
Hispanic urban .	38.53	1,926	11.5	609	3.6	898	5.3
White suburban .	24.11	1,205	3.8	562	1.8	562	1.8
White rural . . .	24.56	1,228	6.4	572	3.0	572	3.0

NOTE: Figures in the last four columns of the table are based on estimates of employment during 1978 for youth 16 to 22 enrolled in school, classified by sex and ethnic group. See Michael E. Borus et al., "Pathways to the Future: A Longitudinal Study of Young Americans, Preliminary Report: Youth and the Labor Market, 1979," Center for Human Resources Research, the Ohio State University, 1980, p. 84 (table 4.6).

[a] Different population groups are presented for male and female students.

[b] Based on the mean hours of work a week and the mean hourly wage for students in the population group.

[c] Estimated annual earnings as a proportion of the mean family income in the population group.

is more appropriate, then, to assume that teenagers work less than 50 weeks a year. A second estimate of the annual earnings of students is derived by applying estimates of weeks employed reported in the DoL study of youth labor force behavior for youth enrolled in school during 1978, by sex and ethnic group.[1] Using these figures, estimates of annual earnings are reduced substantially for all groups.

Based on these estimates, black male seniors in rural areas would earn $1,126, representing 8.2 percent of their mean family incomes. While white male seniors in suburban areas would earn much more ($1,994), thus would represent only 6.3 percent of family income. Among all population groups--males and females, sophomore and seniors--black female seniors in rural areas tend to earn most as a proportion of their family incomes, followed by urban Hispanics. Relative student earnings are lowest among sophomore females and highest for senior males, as could be expected, but variations among ethnic and location groups seem quite small, within cohort and sex, implying that the relative economic benefits from employment are the same in population groups with low family income as they are in groups with high family income. The major reason for this finding is that white students, who generally have higher family income, tend to be employed for more weeks during the year than either Hispanics or blacks and thus accumulate more earnings.

In a final look at student earnings relative to family income, annual earnings for the ten subpopulations in each cohort are estimated assuming that all students have a chance to work and an interest in

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[1] These figures do not differentiate between younger and older youth enrolled in school, nor do they differentiate types of community. Nonetheless they probably provide the closest approximation that can be achieved at present.

TABLE 3.15

ESTIMATES OF ANNUAL EARNINGS FOR TEN SUBPOPULATIONS OF SENIORS USING THREE DIFFERENTLY BASED ASSUMPTIONS ABOUT THE NUMBER OF WEEKS EMPLOYED

Population group[a]	Weekly earnings[b]	Based on 50 weeks of employment a year		Based on estimates of the number of weeks employed in a year from DoL/NLS Study		Based on working the number of weeks as whites estimated in DoL/NLS	
		Annual earnings	Percent of family income[c]	Annual earnings	Percent of family income[c]	Annual earnings	Percent of family income[c]
Male							
Black urban . . .	68.87	3,443	20.0	1,095	6.4	1,846	10.7
Black rural . . .	70.85	3,542	25.8	1,126	8.2	1,899	13.9
Hispanic urban .	78.96	3,948	22.4	1,634	9.3	2,116	12.0
White suburban .	74.39	3,719	11.8	1,994	6.3	1,994	6.3
White rural . . .	69.74	3,487	16.0	1,869	8.8	1,869	8.8
Female							
Black suburban .	59.36	2,968	16.1	849	4.6	1,383	7.5
Black rural . . .	53.82	2,691	22.9	770	6.5	1,254	10.7
Hispanic urban .	59.68	2,984	18.0	943	5.7	1,390	8.4
White suburban .	59.30	2,965	9.4	1,382	4.4	1,382	4.4
White rural . . .	50.98	2,549	12.7	1,188	5.7	1,188	5.9

NOTE: Figures in the last four columns of the table are based on estimates of employment during 1978 for youth 16 to 22 enrolled in school, classified by sex and ethnic group. See Michael E. Borus et al., "Pathways to the Future: A Longitudinal Study of Young Americans, Preliminary Report: Youth and the Labor Market, 1979," Center for Human Resources Research, the Ohio State University, 1980, p. 84 (table 4.6).

[a] Different population groups are presented for male and female students.

[b] Based on the mean hours of work a week and the mean hourly wage for students in the population group.

[c] Estimated annual earnings as a proportion of the mean family income in the population group.

working the same number of weeks a year as white males and females (for the male and female populations respectively). As one can see from the last column in tables 3.15 and 3.16, student earnings constitute a much larger proportion of family income for minority groups than for whites. At one extreme, white female sophomores in suburban areas have estimated annual earnings that are only 1.8 percent of their mean family incomes. At the other extreme, black male seniors in rural areas have estimated earnings that come close to one-sixth of their mean family incomes, a proportion that can be quite meaningful in helping the family out.

While employment during high school may be an important experience in its own right, and in its implications for future integration into the adult world, it is also the case that it has immediate economic benefits. It is possible that students use all their earnings for personal consumption and do not turn anything over to their parents (as noted, we have no information on this matter at present). But even if this is so, that students have income would mean less demand on the income of parents, and the family as a whole would benefit. Some implications for unemployment are immediately evident. Being unemployed means foregoing income that could amount to between $500 and $1,500 for sophomores and $1,000 to $2,000 for seniors. High unemployment is also concentrated in population groups where student employment can contribute most (in relative terms) to family income. Thus, by increasing the number of weeks per year that minority students are employed and reducing their unemployment rate, more students could earn up to $2,000 annually--a sum that could have great economic importance for certain population groups.

Students, and high school students in particular, are different from most adult members of the society in that education is considered a legitimate substitute for work activity and they are not expected to engage in work until after they complete their schooling. Economic advances in past decades have also made it less necessary for most teenagers to work in order to support their families. For the most part, then, high school students are free to decide whether or not to work. In a situation such as this it is of particular interest to study the way in which wages are related to the choice to participate in the labor force and indeed to find or accept a job.

A significant number of students said that they would take a job that paid less than $3 an hour when asked the lowest wage at which they would accept a job during high school. The figures for a reservation wage of less than $3 an hour ranged from 26 percent of the seniors to 54 percent of the sophomores (table 3.16). Over 50 percent of the seniors and 80 percent of the sophomores would take a job at a wage no higher than $3, and only a small fraction of the students would require $4 or more before they took a job. More females and more white students would take a job at $2 an hour (tables 3.16 and 3.17). The mean wages summarize the distribution for each of the population groups, and the largest difference in reservation wages seems to be between the sophomore and senior cohorts. Males have a reservation wage about $.30 to $.50 higher than the wage for females, and blacks and Hispanics have higher reservation wages than whites.

These findings should be particularly useful in the ongoing debate on minimum wages and how they should apply to youth. It has often been suggested that the minimum wage be set at a lower rate for

TABLE 3.16

PERCENTAGE DISTRIBUTIONS OF LOWEST WAGE (RESERVATION WAGE) STUDENTS WOULD ACCEPT WHILE IN HIGH SCHOOL, BY SEX AND GRADE: SPRING 1980

Reservation Wage	Sophomores			Seniors		
	Total	Males	Females	Total	Males	Females
(N)	3,412,049	1,638,011	1,758,629	2,865,309	1,381,940	1,483,36
Total	100.0	100.0	100.0	100.0	100.0	100.0
Below $1.50	7.0	3.0	10.8	2.1	1.0	3.0
$1.50	7.0	3.3	10.6	1.8	0.8	2.8
$1.75	3.6	2.5	4.7	1.2	0.5	1.9
$2.00	10.6	9.9	11.4	4.4	3.1	5.6
$2.25	3.6	3.3	3.6	1.9	1.5	2.4
$2.50	10.9	11.8	10.1	6.3	5.7	6.8
$2.75	11.3	11.0	11.6	8.7	6.9	10.3
$3.00	28.9	34.6	23.4	43.1	42.6	43.6
$3.25	8.8	10.6	7.0	17.3	19.4	15.4
$3.50	3.6	4.3	2.9	6.2	8.4	4.1
$3.75	1.7	1.7	1.7	2.5	3.2	2.0
$4.00 or more . . .	3.0	4.0	2.2	4.5	6.9	2.1
Mean reservation wage	2.74	3.01	2.57	2.94	.5	2.84

teenagers than for adults. It is of interest to note that students represented in this study, whether males, females, whites, or nonwhites, have an average reservation wage that is lower than the federally established minimum wage. Although many considerations are involved in decisions about a minimum wage for youth, the data seem to suggest that many teenagers are willing to work at fairly low wages and would do so if opportunities were available.

Though the findings suggest that, on the whole, the lowest wages necessary to induce high school students to take a job are quite low, the question still remains whether high reservation wages inhibit labor force participation and increase the likelihood of unemployment among certain student groups. In the continuing debate over the employment situation of youth one hypothesis has been that teenagers may have unrealistically high expectations of the labor market, that some hope to receive higher wages than are actually offered for the types of jobs they can fill. As a result these students remain unemployed or leave the labor force. An attempt was made to test this hypothesis by including reservation wages in a regression model to predict rates of participation, as presented in an earlier section of this report. Reservation wage was also included in a model predicting unemployment. In both of these cases the reservation wage was found to have relatively little significance. More important, it was found to have a positive relationship to participation rate and a negative one to unemployment, which is exactly the reverse of what would be expected according to the hypothesis.

Tables 3.18 and 3.19 present the mean reservation wages for all ethnic and gender groups in each of the high school cohorts by employment status. In effect, this controls for the three characteristics with

TABLE 3.17

PERCENTAGE DISTRIBUTIONS OF LOWEST HOURLY WAGE (RESERVATION WAGE) STUDENTS WOULD ACCEPT WHILE IN HIGH SCHOOL, BY ETHNIC GROUP AND GRADE: SPRING 1980

Reservation Wage	Sophomores			Seniors		
	Blacks	Hispanics	Whites	Blacks	Hispanics	Whites
(N)	389,711	270,703	2,375,860	283,827	180,937	2,096,671
Total	100.0	100.0	100.0	100.0	100.0	100.0
Below $1.50	3.6	4.8	8.0	1.2	1.5	2.2
$1.50	4.1	4.5	8.0	1.3	1.5	1.8
$1.75	4.5	3.7	3.6	1.7	1.2	1.2
$2.00	7.7	8.5	11.6	3.5	2.5	4.8
$2.25	3.5	3.3	3.6	2.2	1.8	2.0
$2.50	9.4	9.5	11.4	5.8	5.5	6.4
$2.75	13.3	11.5	11.0	11.0	9.5	8.4
$3.00	27.0	30.2	28.5	37.2	34.4	44.1
$3.25	10.8	10.7	8.2	18.7	19.4	17.0
$3.50	5.2	6.3	2.9	6.4	8.0	6.0
$3.75	4.1	2.7	1.2	4.9	3.7	2.1
$4.00	6.8	4.3	2.0	6.1	6.0	4.0
Mean reservation wage	$2.77	$2.73	$2.53	$3.01	$3.02	$2.93

the intention of discovering differences that exist between the employed, the unemployed, and students who were out of the labor force. It is quite clear that differences within each ethnic and gender group are quite small. For example, among black sophomore males, employed students had a reservation wage of $2.85, as compared with $2.85 and $2.74 for the unemployed and those out of the labor force respectively. Among white senior females the reservation wage is $3.08 for employed students, $2.94 for the unemployed, and $3.01 for students not in the labor force. A second column in the tables shows the mean wages earned by those working in each ethnic, gender, and grade group, and a third column shows the ratio of the two. For all but sophomore females the ratio is less than 1.0, which indicates that the reservation wages are lower than but closely related to the actual wages a person may receive, given his or her ethnic background, sex, and cohort.

It is also evident that in most cases the reservation wages of the employed are slightly higher than those of the unemployed, a fact that is likely to refute the hypothesis that unrealistically high expectations may be a cause of youth labor force difficulty. The ratios for black youth are only marginally higher than the ratios for whites and Hispanics in the sophomore year, and no differences exist in the senior year.

Although the findings presented do not generally support the hypothesis that high expectations (reservation wages) are keeping youth from getting jobs, the queue hypothesis is still a plausible one. According to this hypotheses, all those who want to work can be ordered on some imaginary continuum based on characteristics that are desirable to employers, such as skills, motivation, and compliance. The higher

TABLE 3.18

MEAN RESERVATION WAGE AND WAGES EARNED FOR SOPHOMORES, BY SEX, ETHNIC GROUP, AND EMPLOYMENT STATUS: SPRING 1980

Employment Status	Male			Female		
	Reservation Wage	Earned Wage	Reservation/ Earned	Reservation Wage	Earned Wage	Reservation/ Earned
Black						
Employed	2.85	3.00	.95	2.65	2.52	1.05
Unemployed	2.85		.95	2.85		1.13
Out of labor force	2.74		.91	2.76		1.09
Hispanic						
Employed	2.87	3.12	.92	2.81	2.56	1.10
Unemployed	2.87		.92	2.55		1.00
Out of labor force	2.79		.89	2.70		1.05
White						
Employed	2.73	3.01	.91	2.30	2.19	1.05
Unemployed	2.79		.93	2.51		1.15
Out of labor force	2.68		.89	2.35		1.07

NOTE: For definition of employment status categories see appendix A.

TABLE 3.19

MEAN RESERVATION WAGE AND WAGES EARNED FOR SENIORS, BY SEX, ETHNIC GROUP, AND EMPLOYMENT STATUS: SPRING 1980

Employment Status	Male			Female		
	Reservation Wage	Earned Wage	Reservation/ Earned	Reservation Wage	Earned Wage	Reservation/ Earned
Black						
Employed	3.11	3.35	.93	3.05	3.20	.95
Unemployed	2.97		.87	2.98		.93
Out of labor force.	2.95		.88	2.88		.90
Hispanic						
Employed	3.16	3.43	.92	2.93	3.16	.93
Unemployed	2.99		.87	2.91		.92
Out of labor force.	3.05		.89	2.91		.92
White						
Employed	3.08	3.43	.90	2.86	3.12	.92
Unemployed	2.97		.87	2.79		.89
Out of labor force.	3.01		.88	2.71		.87

NOTE: For definition of employment status categories see appendix A.

one's rating on the desired characteristics the more likely one is to be employed. It follows from this, in the case of the population reported on here, that employed students may be qualitatively different from those unemployed or out of the labor force, and that a simple comparison of their reservation wages is therefore inappropriate. In other words, according to the queue hypothesis unemployed students may have lower reservation wages than employed students, but these reservation wages may still be too high in comparison with their skills, motivation, and other characteristics important to employers, and as a result they remain without a job.

We assume here that the grade point average (GPA) of students may serve as a proxy for a measure of desirability to employers. The GPA measures (in part) individual ability, but it probably reflects motivation and compliance with school rules as well. Furthermore, it is the indicator of skills employers are most likely to have access to. As a final step, then, differences in GPA between employed and unemployed students will be taken into account. This is done by predicting the reservation wages of unemployed students and students out of the labor force under the assumption that they have the same mean GPA as employed students (table 3.20). The reservation wages adjusted in this manner do not differ by more than one or two cents from the unadjusted reservation wages of sophomores and seniors, both male and female. The hypothesis that high reservation wages are keeping certain youth populations from obtaining a job receives no support in the findings of this study, and this is true even when possible differences in skills or other characteristics deemed desirable by employers are taken into account.[1]

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[1]The findings remained essentially the same after type of community was included in the prediction models used for adjusting the rates, not presented here.

TABLE 3.20

RESERVATION WAGES AND RESERVATION WAGES ADJUSTED FOR DIFFERENCES IN GRADE POINT AVERAGE, BY SEX, GRADE, AND EMPLOYMENT STATUS: SPRING 1980

Employment Status	Male		Female	
	Reservation Wage	Adjusted Reservation Wage[a]	Reservation Wage	Adjusted Reservation Wage[a]
Sophomores				
Employed	2.85	(2.85)	2.36	(2.36)
Unemployed	2.80	2.81	2.61	2.60
Out of labor force .	2.71	2.72	2.45	2.47
Seniors				
Employed	3.09	(3.09)	2.88	(2.88)
Unemployed	2.98	2.97	2.84	2.82
Out of labor force .	3.00	3.00	2.75	2.77

NOTE: For definition of employment status categories see appendix A.

[a]Predicted reservation wages using the mean grade point average of employed students in the equations. The regression models used for prediction are presented in appendix D.

There is one exception to these generalizations about reservation wages. All sophomore females, regardless of their ethnic background and employment status, had higher reservation wages than the mean wages earned. In the case of white and black females, those who were not employed had higher reservation wages than those employed. For these populations, then, it is possible that low participation rates and high unemployment are related, in part, to their realization that they will earn only 55 to 75 percent of the wages earned by males and their unwillingness to accept jobs at the low wage rates offered.

Up to this point I have considered the wages and reservation wages of youth in relation to one background or individual characteristic at a time. Before concluding this part of the report, I will consider the effects of the major factors discussed earlier in a multivariate framework (based on an OLS regression model). The figures presented in tables 3.21 and 3.22 represent the measured effect of one particular factor with all other factors statistically controlled. Thus, in the case of sophomores, after possible differences between males and females on a number of variables are taken into account, females earn $.78 an hour less than males, and their reservation wage is $.37 lower than that of males. In both cohorts, differences between males and females remain substantial. Wage differences by type of community and ethnic group are also statistically significant, but school program has little net impact on wages except for the difference in actual wages between the college preparatory students and students in other programs.

In both the sophomore and senior cohorts urban and suburban students have higher reservation wages than rural youth and they also earn more. The hourly wages of urban sophomores are $.06 higher than the hourly wages of rural sophomores, and the difference is $.07 in the case of seniors. The impact of ethnicity is more interesting because of the change that takes place between the sophomore and senior years (based on the cohort comparison). Black sophomores and Hispanic sophomores have higher reservation wages than whites ($.17 and $.07 higher, respectively). Their hourly earned wages are also higher, thus justifying to a certain extent the higher expectations. In the senior year the relationship of ethnicity to earnings is reversed. Blacks and Hispanics earn lower wages than whites and have slightly lower reservation wages.

TABLE 3.21

WAGE DIFFERENCES[a] (IN DOLLARS) FOR SOPHOMORES BY SEX, ETHNIC GROUP, RESIDENTIAL LOCATION, AND SCHOOL PROGRAM: SPRING 1980

Wage	As Compared with Males	As Compared with Whites		As Compared with Rural Residence		As Compared with the General School Program	
	Females	Blacks	Hispanics	Urban	Suburban	Vocational	College Preparatory
Reservation wages . .	-0.37	0.17	0.07	0.12	0.06	-0.02[b]	0.03
Earned wages	-0.78	0.12	0.10	0.06	-0.01[b]	-0.05[b]	0.05[b]

[a]After controlling for other individual and background characteristics, based on OLS regression models presented in appendix D.

[b]The coefficient on which this is based is not statistically significant at the 1 percent level.

TABLE 3.22

WAGE DIFFERENCES[a] (IN DOLLARS) FOR SENIORS BY SEX, ETHNIC GROUP, RESIDENTIAL LOCATION, AND SCHOOL PROGRAM: SPRING 1980

Wage	As Compared with Males	As Compared with Whites		As Compared with Rural Residence		As Compared with the General School Program	
	Females	Blacks	Hispanics	Urban	Suburban	Vocational	College Preparatory
Reservation wages . .	-0.28	-0.03	-0.07	0.07	0.06	-0.01[b]	0.14
Earned wages	-0.36	-0.10	-0.12	0.07	0.06	0.01[b]	0.17

[a]After controlling for other individual and background characteristics, based on OLS regression models presented in appendix D.

[b]The coefficient on which this is based is not statistically significant at the 1 percent level.

As the students get older and approach entry into the adult labor market, the earnings of whites surpass the earnings of nonwhites even though they start out at lower wages. This, most likely, is related to the job structure of younger and older youth and the faster transition into structured jobs that pay more among white youth. This issue is elaborated in the following chapter.

Vocational students and students in the general program do not differ in their reservation wages nor in actual wages earned. Yet, senior students in the college preparatory program earn $.17 an hour more than students in the general program, with grade point average controlled (GPA has a negative relationship to wage, as shown in table C.9 in appendix C). Since the wages of vocational students do not differ from those of general students, these findings indicate that, even with a number of background characteristics controlled, vocational students do not command higher earnings than similar students in different programs, and it also appears that a college preparatory program serves as a credential rewarded by employers even while youth are still in school.

Age is an important factor in determining reservation wages and actual wages, primarily for sophomores (table C.9, appendix C). The one-year difference between 15 and 16 years of age results in a $.10 increase in the reservation wage of students and a $.16 increase in the actual hourly wages. The change from 17 to 18 is accompanied by only a $.03 difference. The effect of the grade point average on wages is more striking. For seniors a one-point increase (on a scale from 1 to 10) is associated with a $.13 decrease in the reservation wage and a $.29 drop in hourly wages. Similar, though smaller, changes

are found for sophomore students as well. A possible explanation for this paradoxical finding may lie in the differences in the types of jobs students hold and possibly in the differential importance students with low or high grades attribute to employment during high school. Students with high grades are more likely to go to college and may view employment during school in a more casual way, taking lower-paying and less-demanding jobs. (I return to this issue in the discussion on the type of jobs students have.)

In conclusion, environmental factors such as type of community and geographic location affect the wages and reservation wages of students, as do background factors such as race, ethnicity, and family income. In particular, sex emerges as the strongest determinant of wages, and, although the reservation wages of females are lower than those of males, the difference is not quite as great as the difference in actual wages. This implies that wage expectations of females, relative to those of males, are higher than can be achieved in the job market and are therefore a possible source of employment difficulty for females, especially younger females. But the findings on wages and reservation wages for high school students as a whole are as interesting as variations among student subpopulations. The modal wage for all students (except sophomore females) was between $3.10 and $3.49--just slightly above the minimum wage. A large proportion of students still earned below the minimum wage (most of these were not likely to have been covered by minimum wage legislation), but some--over 10 percent of the students--earned $4 or more. The reservation wages of students may be considered realistic in that they correspond to the actual wages earned by teenagers in school. In fact, the data show no support for the argument that high wage expectations are a source

of youth's labor force difficulty (with the possible exception of sophomore females). On the contrary, most high school youth are apparently willing to work at fairly low wages, lower wages than they currently receive--lower, even, than the Federal minimum wage.

CHAPTER 4

JOBS STUDENTS HOLD

4.1. Jobs and Student Characteristics

The job categories used in the present study do not correspond strictly to common classifications, such as those used by the Bureau of Labor Statistics. The major disadvantage of this is obviously that simple comparisons with other data sources are not possible (though comparisons of a few specific job categories can be made). However, given that the target population of the study is youth still in high school, the common classifications created and used primarily for adult workers are not entirely appropriate.

Studies in the past have found that teenagers take jobs in practically all industries and most occupational groups. Yet there is a tendency among them to concentrate in certain entry jobs that require low skill and little commitment. The distribution of students now employed according to the types of jobs they have is presented in table 4.1. It is disappointing to note that approximately 20 percent of the students are placed in the "other" category. Evidently, they did not find a suitable description of their jobs in the predesignated list of categories. The proportion of students assigned to this category is quite different for males and females but does not vary by other individual characteristics. Keeping that in mind, and since there is no way of overcoming this difficulty by assigning students to categories, those who have "other" jobs are included as a separate category in this and subsequent analyses, but relatively little attention is focused on them.

TABLE 4.1

TYPE OF JOB HELD BY STUDENTS CURRENTLY EMPLOYED, BY GRADE: SPRING 1980

(Percent)

Type of Job	Sophomores	Seniors
(N)	(1,392,304)	(1,782,154)
Total	100.0	100.0
Odd jobs	8.2	1.9
Food service	12.2	16.8
Babysitting	26.3	4.7
Farm work	6.6	3.9
Factory work	1.4	3.4
Skilled trade ...	3.6	6.2
Manual labor	7.4	7.6
Store clerk	7.2	21.5
Clerical work ...	2.7	9.9
Health related ..	1.3	4.1
Other	22.7	20.0

For one-quarter of the sophomores babysitting is the major work activity. This is the single largest job category for this group, followed by food services and odd jobs such as lawn work. These three job types account for close to 50 percent of the cohort's workers and the "other" category accounts for an additional 23 percent. The rest are distributed among manual labor, farm work, sales, and, to a much lesser extent, skilled trade, clerical work, and jobs related to the health industry. In the senior cohort, store sales are the modal category, and a high proportion of students have jobs in the food service industry. The proportion of students who do babysitting is dramatically different

from that in the sophomore year. Based on the job distribution in the two cohorts we can infer that students who babysit in early adolescence tend to move into jobs in such areas as sales and food service toward the end of high school.

Since we are interested here in the jobs of in-school teenagers, it is legitimate to study the sophomores and seniors in a cohort-comparison framework. The fact that these are not the same students and that some of the sophomores will drop out of school before they reach the senior year need not cause too much concern. The greatest change between sophomores and seniors, as mentioned earlier, is in the proportion babysitting. Also, the percentage of students holding odd jobs decreases and practically disappears by the senior year. Farm work is the third and last category that decreases. Overall, then, between the sophomore and senior years students tend to move out of odd jobs, babysitting, and farm work, and to move, primarily, into sales (a jump from 4.2 percent to 21.5 percent) and food service work. Although only a very small fraction of students have factory or skilled trade jobs, the proportion in the senior year is about double that in the sophomore year. Even greater increases are found in clerical and health-related jobs.

The distribution of students among various jobs is markedly different for males and females (figure 4.1).[1] Half the sophomore females who work for pay do babysitting. This is not at all surprising considering

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[1]In considering the male-female differences, the reader should keep in mind that the proportion of males in the "other" job category is double that of females in the sophomore cohort and about two-thirds higher in the case of seniors, and it is not at all clear what sort of jobs these students hold.

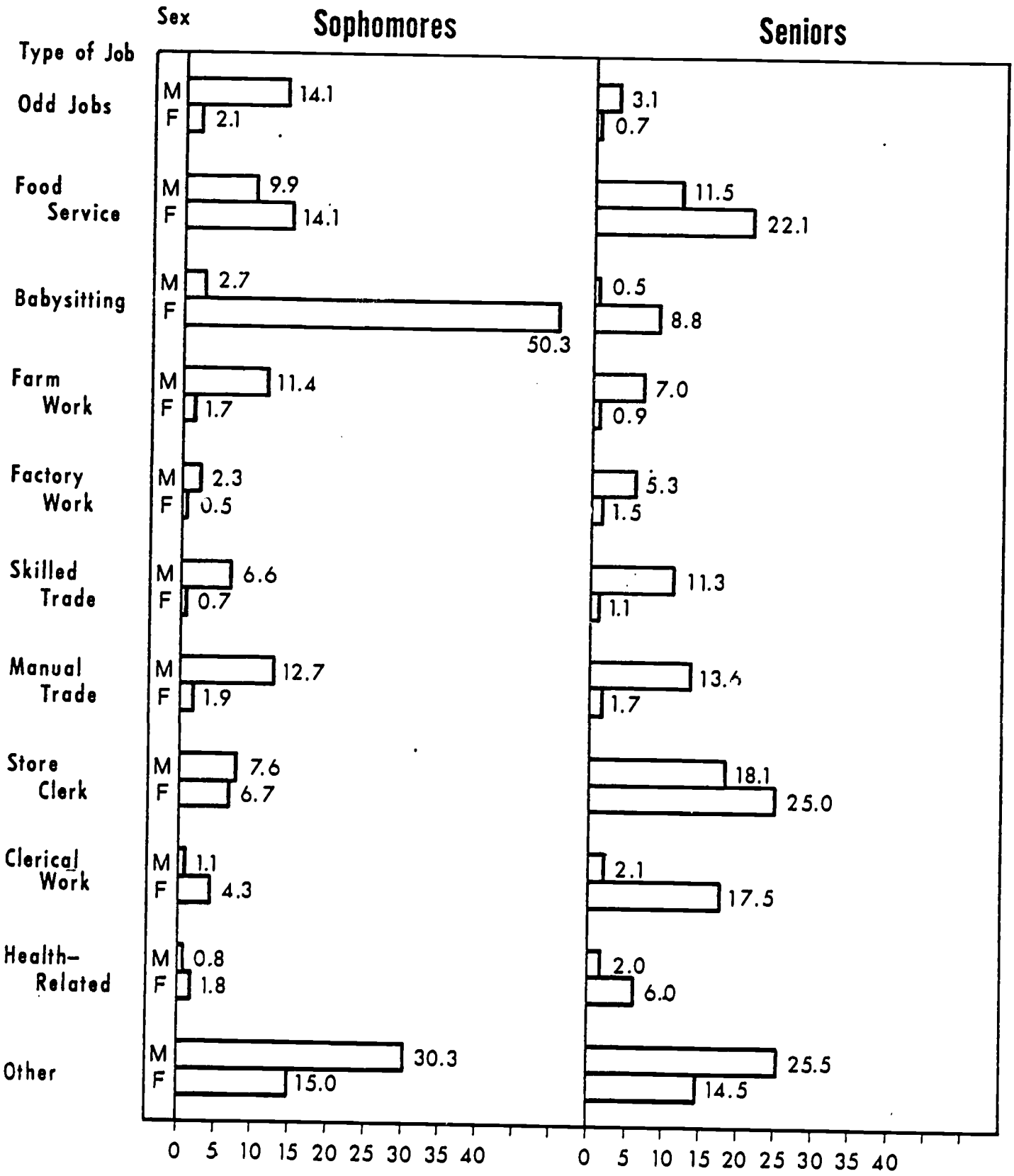


Fig. 4.1. Jobs students held, by sex and grade: Spring 1980

that these teenagers are still in school, have limited saleable skills, and are willing to spend only a small number of hours at work. What may be more surprising is that by the senior year the proportion of female students babysitting declines to less than 10 percent. Changes for females and males are noted in other job categories as well. Males, who tend to have odd jobs or work in farm or other manual jobs during the sophomore year, are more likely to be in sales, food services, and skilled trade at a later age.

Comparing males and females makes it clear that the greatest differences are found in the smaller, more specialized job categories: 17.5 percent of the senior females had a clerical job as compared to 2 percent of the males; 11 percent of the males were in skilled trade and 14 percent in manual trade in contrast to 1 percent and 2 percent, respectively, in the case of the females. Apparently, sex differentiation (and possibly stereotyping) exists even at this stage, where work is a secondary activity, and jobs, for the most part, are low-skill, non-specialized jobs.

Ethnic differences are not quite as pronounced as gender differences in job distribution (figure 4.2). In the younger cohort blacks are more likely to have some sort of odd job (12.3 percent) than are whites and Hispanics (7.8 percent), but the differences disappear in the senior cohort. Hispanic sophomores are least likely to do babysitting, and a higher proportion of them are in food services (15.2 percent) and in store sales (11.8 percent). These patterns can mostly be accounted for by the job distribution of females. Hispanic sophomore females differ from their white and black peers, for whom babysitting is the primary form of work activity, in being more likely to have

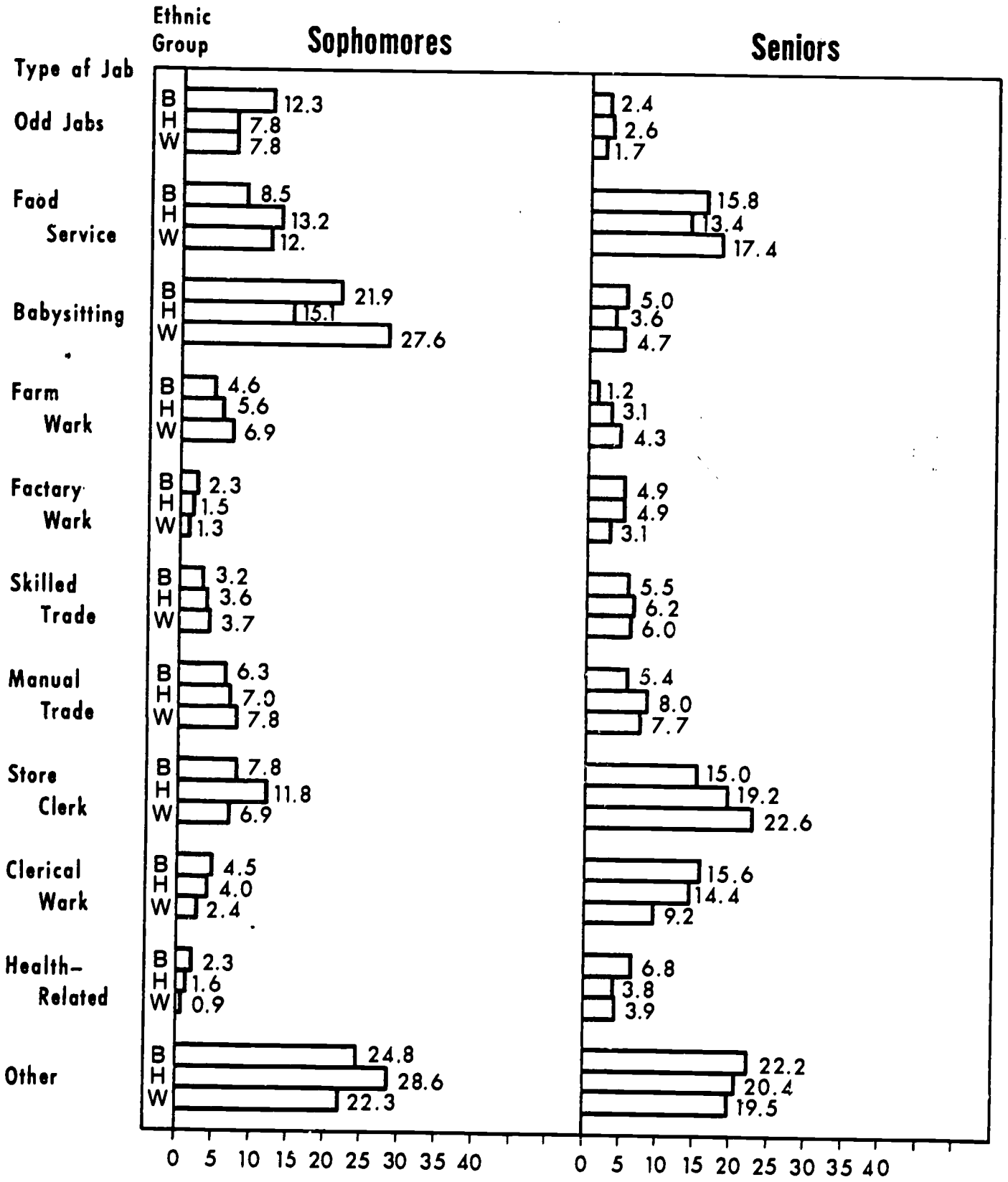
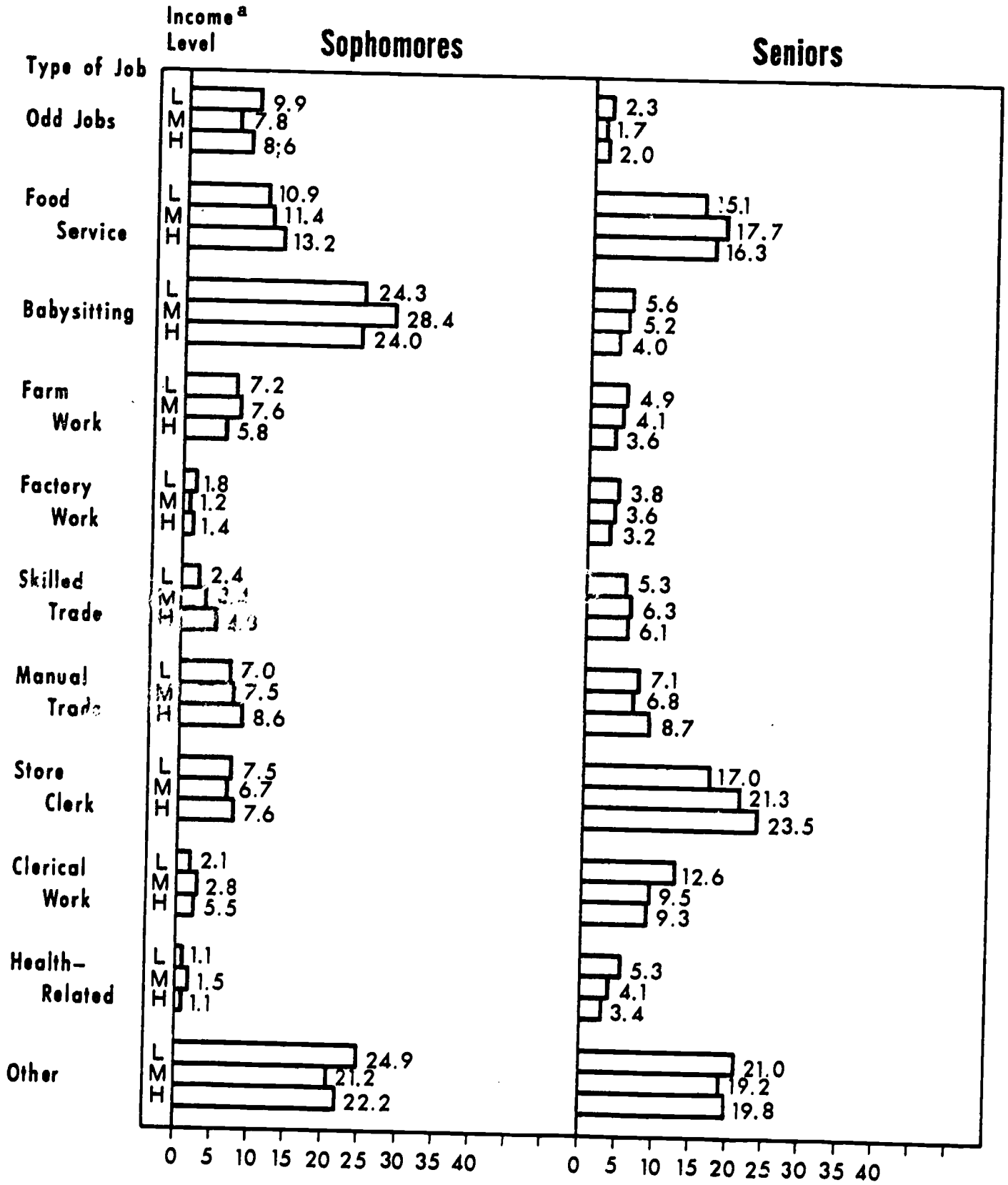


Fig. 4.2. Jobs students held, by ethnicity and grade: Spring 1980

food service or sales jobs. In the senior cohort, ethnic differences are quite small. Though minority youth are more likely than white youth to have office jobs and slightly less likely to be store clerks, very similar proportions of youth in all ethnic groups have farm or other manual jobs or work in factories or in skilled trades.

Other background characteristics possibly related to the job distribution of high school students are family income and the type of community in which the student resides. Family income is highly correlated with other family characteristics such as parental education, father's occupation (which was not used in this analysis because of the high proportion of cases that did not report an occupation for father), and social contacts. The social position of higher income families can be expected to facilitate the finding of certain jobs that are less available to the children of low-income families, but this is not the case in the population under study. Figure 4.3 shows only minor differences in the job distribution by family income. In the sophomore cohort, the only difference that is greater than 3 percentage points is in babysitting, which is slightly more common among middle-income students than students from families with high and low incomes. In the senior cohort, differences are not much greater. Only in the sales category do students from low-income families have a lower frequency than middle- and high-income students. Low-income students are also more likely to have office jobs than students in higher income levels. In all, family income has very little effect on the job distribution of students. Even when we consider only the extremes--students who reported a family income of $38,000 or more, or students from families earning less than $7,000 a year--the results are not altered, confirming the lack of relationship between family income and type of job.



[a]Income levels are as follows: L = less than $12,000 a year, M = $12,000 to $20,000 a year, H = more than $20,000 a year.

Fig. 4.3. Jobs students held, by family income and grade: Spring 1980

As for community type, figure 4.4 shows that only some occupational groups are affected, primarily by the rural/urban distinction. This is very important in the sophomore cohort, where 14 percent of the rural youth have jobs related to agriculture. The figure is only 4.7 percent in suburban areas, and slightly over 1 percent for urban youth. The same pattern is found for seniors, though the proportion of students in farm jobs among seniors is only half that of the sophomores. Only slightly fewer rural students have sales or office jobs, as compared with suburban and urban residents. In all, the job market for youth in one type of community is not much different from other types of communities. Though farming is, almost by definition, concentrated in rural areas, it is still the case that only 9 percent of the senior students in rural areas are occupied in agricultural jobs. In other job categories, the differences are quite small and show locality to have little effect on the type of job a high school student is likely to hold.

The last characteristic to be considered is the school program in which the student is enrolled. The differences are expected to be larger in the senior cohort than in the sophomore cohort, since the programs become more differentiated at the later stages of school. Figure 4.5 shows that differences between programs exist with respect to babysitting, farm work, and skilled trades. College preparatory sophomores are more likely to babysit than other students and are less than half as likely as others to have farm jobs (3.6 percent in contrast to 7.4 and 9.6 for general students and vocational students respectively). In the senior year the major difference is between the vocational students and students in the other two programs: 16 percent of the vocational students have office jobs, but only 7.3 percent of the seniors in the

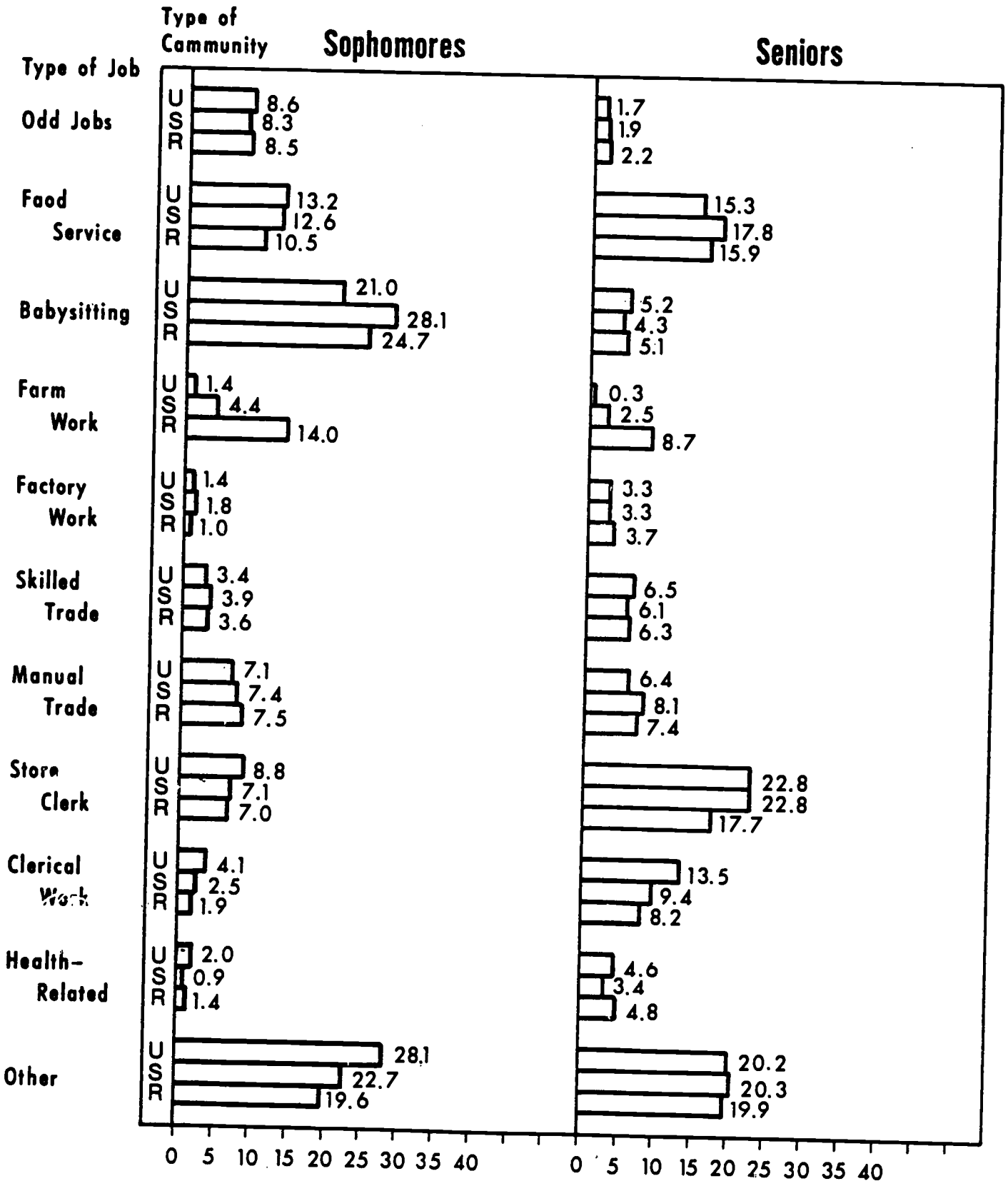
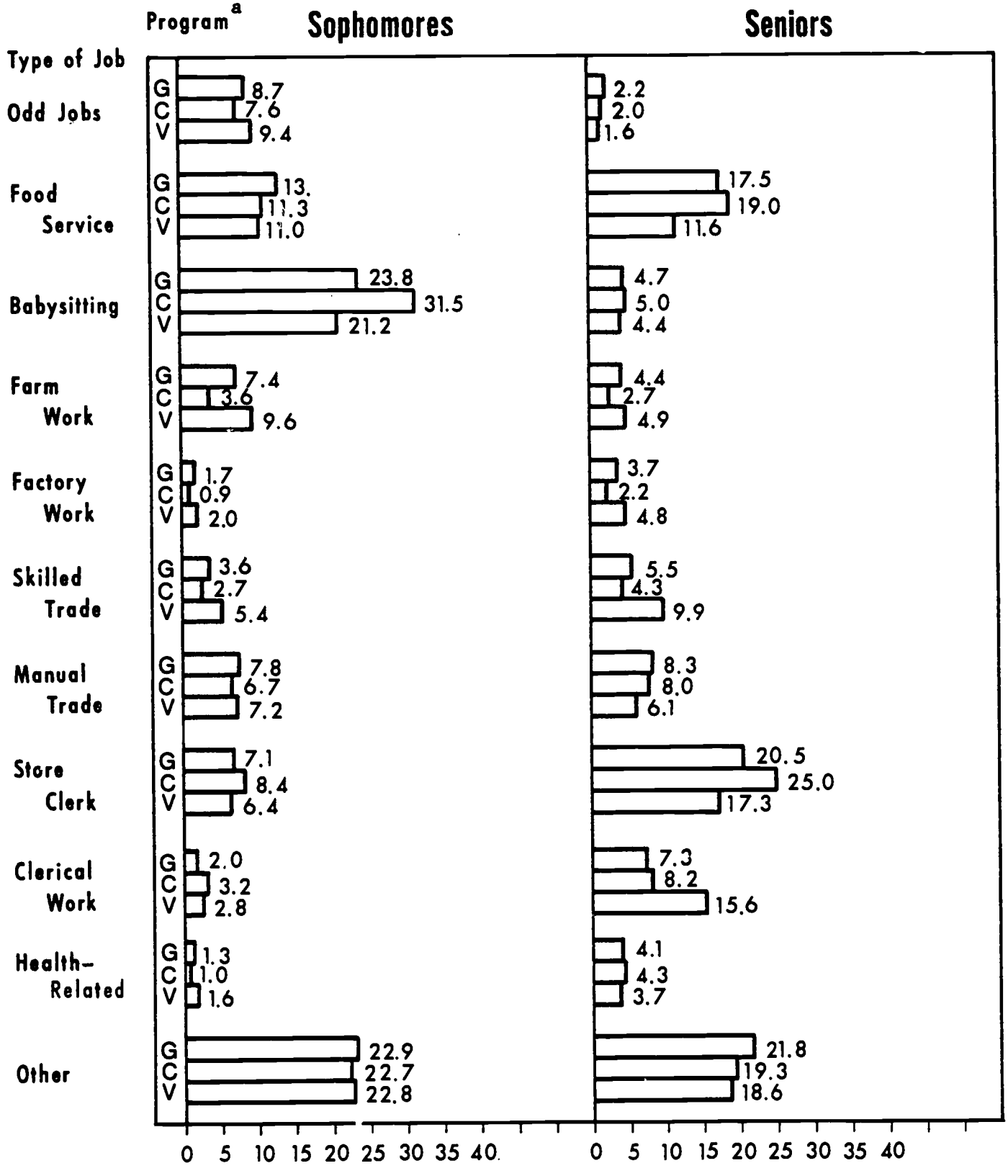


Fig. 4.4. Jobs students held, by type of community and grade: Spring 1980



[a]School program categories are as follows: G = general, C = college preparatory, and V = vocational.

Fig. 4.5. Jobs students held, by high school program and grade: Spring 1980

general program and 8.2 percent in the college preparatory program do clerical work; and about 10 percent of the vocational students have skilled jobs, twice as many as other students. College preparatory students are least likely to do farm or factory work and are less likely to have a skilled trade than other students. They tend to have jobs as store clerks or in food service.

4.2. Characteristics of the Job

The range of jobs held by teenagers is probably limited only by the coarseness of the classification used by the researcher. Teenagers, even those still in high school, are in all kinds of jobs, and no one job category used in this study contains more than one-quarter of the senior student body. But does this variability of jobs make any difference? High school jobs are commonly viewed as homogeneous work experience that does not differ very much from student to student. For the most part, concern with teenage employment has focused on the fact of employment, and very little attention has been paid to job characteristics. A recent study (Greenberger, Steinberg, and Ruggiero 1980), unique in its attempt to study the characteristics of the in-school teenagers' work setting, found substantial differences among jobs held by teenagers in the amount of social interaction, frequency of cooperative behavior, use of skills learned in school, and amount of training received on the job. As work during the school year becomes a more common phenomenon, the job setting becomes more important and more consequential to students' future.

One relevant characteristic of the job is the number of hours typically worked. In food service and sales students are least likely to work less than 15 hours a week (table 4.2). In the case of senior

TABLE 4.2

HOURS WORKED PER WEEK, BY TYPE OF JOB AND GRADE: SPRING 1980

Type of Job	Sophomores				Seniors			
	Total	1-14	15-29	30 or More	Total	1-14	15-29	30 or More
Odd jobs	100.0	86.5	9.4	4.1	100.0	67.9	21.2	10.9
Food service	100.0	36.6	48.9	14.5	100.0	22.9	60.7	16.4
Babysitting	100.0	88.0	8.0	4.0	100.0	75.1	18.5	6.4
Farm work	100.0	45.7	29.1	25.2	100.0	32.5	36.6	30.9
Factory work	100.0	44.9	33.3	21.8	100.0	14.8	50.4	34.8
Skilled trade	100.0	47.8	31.6	20.6	100.0	23.9	48.1	28.0
Manual trade	100.0	57.2	30.0	12.8	100.0	32.3	46.6	21.1
Store clerk	100.0	37.4	50.6	12.0	100.0	18.6	66.0	15.4
Clerical work	100.0	61.0	26.4	12.6	100.0	27.6	62.5	9.9
Health related	100.0	40.1	45.8	14.1	100.0	19.4	61.8	18.8
Other	100.0	60.6	28.5	10.9	100.0	32.8	47.2	20.0

NOTE: Sophomore population = 1,467,528
Senior population = 1,841,717

students only 15 percent of those working in a factory job worked less than 15 hours. Students who do odd jobs or babysitting are most likely to work less than 15 hours a week (68 percent and 75 percent, respectively). Differences exist at the other extreme as well. Students in farm jobs, factory work, and skilled trade are 5 to 6 times as likely as students doing babysitting or odd jobs to work more than 30 hours a week. These differences are clearly summarized in the mean hours of work per week for each job (table 4.3). Since we found earlier that the distribution of students among job categories varied primarily by cohort and sex, the mean hours worked are presented separately for males and females, sophomores and seniors. Within each job category sophomores work fewer

TABLE 4.3

MEAN NUMBER OF HOURS OF WORK PER WEEK, BY TYPE OF JOB, SEX, AND GRADE: SPRING 1980

Type of Job	Sophomores		Seniors	
	Male	Female	Male	Female
Odd jobs	7.6	6.9	12.0	8.5
Food service	19.0	17.2	21.4	19.7
Babysitting	7.8	7.4	13.2	9.9
Farm work	19.0	13.8	21.4	17.6
Factory work	17.9	16.9	24.9	22.9
Skilled trade	17.9	10.1	22.2	16.8
Manual trade	14.7	11.4	20.2	15.0
Store clerk	18.2	16.5	22.4	19.6
Clerical work	12.5	14.1	19.1	18.2
Health related	19.5	16.0	22.4	20.3
Other	14.7	10.5	20.7	16.2

NOTE: Sophomore population = 1,392,265
Senior population = 1,782,105

hours per week, on the average, and females work slightly less than males, except in clerical jobs. But the largest differences are among jobs. Hours worked by sophomores at food service jobs (19.0 hours for males and 17.2 hours for females) were more than double the number of hours worked in babysitting and odd jobs. In the senior cohort, 4 to 5 hours less a week are spent in clerical work than at factory work.

Wages also vary by job type (table 4.4). There is a difference of approximately $1.50 between the highest and lowest paying jobs. Factory work, skilled trade, and health-related jobs are the best-paying jobs for teenagers, whereas farm work, sales jobs, and food service

TABLE 4.4

MEAN HOURLY WAGE, BY TYPE OF JOB, SEX, AND GRADE: SPRING 1980

Type of Job	Sophomores		Seniors	
	Male	Female	Male	Female
Odd jobs	2.86	2.55	3.30	2.86
Food service	3.07	2.88	3.32	3.07
Babysitting	1.77	1.61	2.30	2.00
Farm work	2.90	2.62	3.18	2.82
Factory work	3.29	3.20	3.62	3.46
Skilled trade	3.38	3.12	3.65	3.32
Manual trade	3.16	3.05	3.46	3.32
Store clerk	3.01	2.92	3.41	3.28
Clerical work	3.17	3.03	3.52	3.32
Health related	3.33	3.34	3.56	3.42
Other	3.10	2.92	3.42	3.28

NOTE: Sophomore population = 1,392,265
Senior population = 1,782,105

jobs pay $.30 to $.50 less an hour. Within each job category we find age and sex differences. There is a $.30 to $.40 difference between sophomores and seniors of the same gender in practically all jobs. The sex differences within each cohort are slightly lower, but consistent. Females earn less in every job category, except for sophomores in health-related jobs. On the face of it, this points to age and sex discrimination with respect to wages, and clearly shows that wage differences reported in the previous chapter cannot be attributed (at least not wholly) to the differential age distribution of females and males, sophomores and seniors. Although there is room for further specification of tasks within each job category that may account in part for the observed patterns, it is likely that wage differentiation actually exists and is not simply an artifact of the categories used to classify teenage jobs.

A third characteristic of the job is the amount of training one receives while working. For some students, particularly those who do not plan to go on to college, training received on the job while in high school may be crucial for finding a job later on. The High School and Beyond dataset at present allows study of on-the-job training only in its most general meaning. Students were asked what proportion of their time at work was spent on training, which may include specific instructions from a boss, a course, or simply watching and learning from coworkers. Table 4.5 presents the proportion of students who spent one-quarter or more of their time at work in training, for each job category. We find that in all jobs at least some portion of the students receive some training. This is true even for babysitting and odd jobs. As would be expected the highest proportion of training is in skilled

TABLE 4.5

PERCENT OF STUDENTS WHO SPENT ONE-FOURTH OF THEIR TIME AT WORK IN TRAINING, BY TYPE OF JOB, GRADE, AND PARTICIPATION IN AN IN-SCHOOL TRAINING PROGRAM: SPRING 1980

Type of Job	All Students		Students Who Did Not Participate in an In-School Training Program	
	Sophomores	Seniors	Sophomores	Seniors
Lawn work/odd jobs ..	7.9	14.2	6.3	9.7
Waiter or waitress ..	13.6	12.0	13.1	11.1
Babysitting/child care	4.7	7.1	4.0	5.8
Farm or agriculture .	14.0	16.9	13.3	11.1
Factory, unskilled or semi-skilled work .	18.9	24.0	15.8	21.9
Skilled trade	36.0	38.6	35.0	34.3
Other manual trade ..	12.4	11.7	11.9	9.9
Store clerk/Sales person	18.5	12.5	18.9	10.5
Office or clerical work	20.1	22.7	16.0	17.4
Hospital or health-related	28.2	24.4	228.1	21.2
Other	15.1	17.1	14.6	15.1

trades, where over one-third of the students say they spend a quarter or more of their work time in training. Following skilled trades are health-related jobs and factory work: 28 percent of the sophomores and 24 percent of the seniors in health-related jobs received training, as did about one-fifth of the students in factory jobs. The amount of training is lower for store clerks, farm jobs, and food service jobs. It is very low in babysitting and childcare jobs.

The structure of these differences brings to mind the possibility that more training is a result of specific school programs, such as cooperative-education or work-study programs, which may concentrate on certain jobs such as office occupations and skilled trade. Columns 3 and 4 in table 4.5 present, therefore, the proportion of students in training one-quarter of the time or more, excluding all those who have ever participated in a school-sponsored work/training program. The results, on the whole, remain unchanged, and this should strengthen the conclusion that certain job environments provide more training than others. These, by the way, are the same jobs that pay higher wages and are likely to require (or provide) more hours of work.

The discussion of job characteristics has consistently shown students in odd jobs or babysitting jobs to work the least number of hours, earn the lowest wages, and receive the least amount of training. These are also the jobs considered marginal to the labor market and typical for teenagers. But in fact only a small fraction of teenagers in school, and mostly the younger students, have such jobs. In a more general sense, we may conceive of certain jobs as closely related to the family setting, very similar to household tasks. These tasks are usually performed in an unstructured setting outside any organizational environment. There is no network of coworkers, nor a developed authority structure. Teenagers working in such settings are alone for the most part and have little chance of interacting with others on the job. A second and opposite category, according to this line of reasoning, would includes jobs that are not performed in a family-like environment but rather within a corporate system. These jobs are part of an organization with formal and informal structure. There exist supervisors

and other people that symbolize authority. There are coworkers and other role-types that provide the opportunity for interaction on the job.

Performing odd jobs and babysitting are most closely associated with the first category of jobs just described, which will be referred to as "unstructured." Factory work, office work, health-related jobs, and even food service jobs are considered part of the second category of jobs, which will be called "structured." The structured teenage jobs more closely resemble, and are even part of, the work situation to be faced when the youth becomes adult.

Using the distinction between structured and unstructured jobs we find that over one-third of the sophomores are engaged in unstructured jobs, whereas only 7 percent of the working seniors have such jobs. One interpretation of this change is that youth in high school are not a homogeneous group with respect to work. Although work is a secondary activity for most members of this population, work during this period should not be considered trivial. By the time students reach the last grade, practically all employed students work in an organizational setting that will help prepare them to confront the world of full-time work. Since the process of moving out of unstructured teenage jobs may be an important step in the maturation of an individual in the work force, the question naturally arises whether all students follow a similar pattern between the sophomore and senior years or whether the extent of the movement varies by population group.

Table 4.6 shows the proportion of students in unstructured jobs (after excluding those in the "other" category) in the sophomore and senior cohorts. Figures are presented for a number of population groups,

TABLE 4.6

PERCENT OF SOPHOMORE AND SENIOR STUDENTS IN UNSTRUCTURED[a] JOBS, BY ETHNICITY, TYPE OF COMMUNITY, AND FAMILY INCOME: SPRING 1980

Ethnicity	Type of Community	Family[b] Income	Sophomores in Unstructured Jobs	Seniors in Unstructured Jobs	Sr./Soph. ratio in Unstructured Jobs
All students			45.2	8.0	0.18
Black	urban	high	46.3	7.8	0.17
Hispanic	urban	high	24.6	8.0	0.33
White	urban	high	46.0	7.5	0.16
Black	rural	low	49.7	13.8	0.28
Black	rural	high	48.9	6.2	0.13
Hispanic	rural	low	39.1	15.5	0.40
Hispanic	rural	high	23.2	3.5	0.15
White	rural	low	45.6	12.7	0.28
White	rural	high	41.8	8.1	0.19

[a]Includes students who did babysitting or had odd jobs.

[b]Low-income families are families below the 20th percentile of the income distribution (annual income of less than $12,000). All other are referred to as high-income families.

defined by ethnicity, type of community, and family income.[1] In all population groups there is a very high proportion of sophomore students in unstructured jobs and a decline in that proportion by the senior year. It should be noted that, overall, working Hispanics in the sophomore cohort are least likely to have unstructured jobs--only 25 percent of urban Hispanics with high family income and 23 percent of rural Hispanics with high family income.[2] Only small differences remain in the senior year. The third column of the table gives the ratio of seniors to sophomores in unstructured jobs. This figure can be interpreted as the extent to which students from a certain background remain in unstructured jobs by their senior year.[3] Although fewer Hispanic sophomores have unstructured jobs, compared to other ethnic groups, the proportion for seniors is the same, indicating a greater change between the two years for the non-Hispanics. Rural students from low-income families seem to have the greatest difficulty in moving out of unstructured jobs. This is particularly true of Hispanics where the proportion of seniors in unstructured jobs is 40 percent (0.40) of the proportion of sophomores in these jobs. In all cases students from higher income families do a bit better. Thus, while it is true that most youth move into structured work settings by their senior year and

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[1]The full table for all combinations of ethnicity, type of community, and income groups is presented in appendix B, table B.6.

[2]The sample was divided into two groups: the lowest 20 percent of the income scale, called low income; and all the others called, high income.

[3]Once again, the reader is reminded that the data at hand are cross-sectional. Inferences about changes over time are based on a cohort comparison, not individual changes.

thus are likely to enjoy, as we have seen, higher wages and more training, some youth, primarily low-income and rural high school students, seem to have more barriers to doing so and as a result may be at a disadvantage even though they have jobs.

4.3. High School Jobs and Future Expectations

The job characteristics discussed to this point are only indirectly related to future outcomes. Although differences in the typical wages or hours worked in certain jobs are of great interest, the important issue in the long run is how the work activity during adolescence relates to the overall process of transition. Most such questions can best be answered in the future, when the longitudinal perspective of High School and Beyond will enable us to relate characteristics of the teenage years to future outcomes. At the present stage of the study we can have only a "quick peek" at the future, as measured by job arrangements for after school and the occupational aspirations of students (tables 4.7 and 4.8).

Most students now working who plan primarily to work upon completing high school have a job lined up before the senior year. This in itself suggests something about the importance of work during high school, since the proportion of those working who have a job lined up is double that of students who were not working at the time of the survey (62 percent of students currently working and planning to work upon completion of high school say they have a job lined up, as compared to 31 percent among those who plan to work but do not currently hold a job). But the central concern of this chapter relates to variations among students who hold different types of jobs while in school. The

TABLE 4.7

PERCENT OF SENIOR STUDENTS CURRENTLY EMPLOYED WHO HAVE A JOB LINED UP FOR NEXT YEAR, BY TYPE OF PRESENT JOB AND PLANS FOR AFTER SCHOOL: SPRING 1980

Type of Job	Students Who Do Not Plan to Go to School			Students Who Plan to Go to School		
	Total	Plan to Continue with Same Job	Have New Job Lined Up	Total	Plan to Continue with Same Job	Have New Job Lined Up
Odd jobs	42.8	14.9	27.9	17.2	6.8	10.4
Food service ..	53.1	31.4	21.7	28.4	20.0	8.4
Babysitting ...	30.9	15.6	15.3	12.4	5.4	7.0
Farm work	70.6	46.0	24.6	34.0	20.7	13.3
Factory work ..	78.2	52.7	25.5	41.7	28.5	13.2
Skilled trade .	85.2	62.5	22.7	48.5	32.4	16.1
Manual trade ..	68.0	38.4	29.6	24.9	12.9	12.0
Store clerk ...	68.3	45.1	23.2	24.7	18.9	5.8
Clerical work .	70.2	54.4	15.8	30.2	24.9	5.3
Health related .	74.3	49.6	24.7	34.1	28.9	5.2
Other	60.7	37.5	23.2	40.9	17.4	23.5

figures in table 4.7 suggest that the likelihood of having a job lined up varies by type of job held during the senior year. Approximately three-fourths of the students in health-related and factory jobs and 85 percent of the students in skilled trades who do not plan to go to school immediately upon completion of high school, have jobs lined up for after school, and these tend to be the same jobs held during school. Those doing odd jobs, food service work, and babysitting--the jobs most commonly considered adolescent--have the lowest proportion with a job lined up for after high school. It is interesting to note that between

TABLE 4.8

PRESENT JOB AND OCCUPATIONAL ASPIRATIONS OF SENIOR STUDENTS, BY ETHNICITY: SPRING 1980

Expected Occupation at 30	Present Job				
	Odd Jobs	Food Service	Blue Collar	White Collar	Other
Black					
(N)	9,304	20,587	21,840	48,508	28,549
Total	100.0	100.0	100.0	100.0	100.0
Blue collar ...	15.3	17.1	22.0	6.4	15.5
White collar ...	23.5	16.5	19.9	30.0	20.3
Professional ...	43.6	47.6	34.5	44.7	41.2
Managerial	8.0	11.4	13.7	13.5	14.0
Other	9.6	7.4	9.9	5.4	9.0
Hispanic					
(N)	5,921	13,532	22,966	37,205	20,650
Total	100.0	100.0	100.0	100.0	100.0
Blue collar ...	21.0	14.9	36.1	10.7	25.2
White collar ..	21.?	25.6	17.5	30.0	21.1
Professional ..	29.4	39.8	21.6	44.4	29.3
Managerial	9.6	11.0	16.1	9.5	13.8
Other	18.8	8.7	8.7	5.4	10.6
White					
(N)	84,452	228,299	277,105	472,664	254,519
Total	100.0	100.0	100.0	100.0	100.0
Blue collar ...	12.0	12.7	30.1	9.9	20.0
White collar ..	20.1	20.7	13.4	24.0	18.0
Professional ..	47.3	46.2	32.0	44.6	40.4
Managerial	10.1	12.0	18.2	14.8	13.5
Other	10.5	8.4	6.3	6.7	8.1

NOTE: See appendix A for the construction of categories for present job and occupation at 30.

15 and 30 percent of the students not planning to go to school in all job categories have a new job lined up. The big difference is related to continuing the present job. In some cases, such as skilled trade, office work, or factory work, students are most likely to be planning to continue their present jobs (62.5, 54.4, and 52.7 percent, respectively). Students who hold unstructured jobs are least likely to plan to continue with these jobs, indicating that students regard holding such jobs after adolescence as inappropriate and often impossible.

Even for students who plan to go to school after completing high school and who will probably work part-time, differences exist in the likelihood of having a job lined up. Although students who plan to go to school are only half as likely to have a job lined up, differences within present job categories are similar in their pattern to the differences discussed earlier. Certain jobs provide more opportunity for continuity and smooth transition into adult careers. Overall this is more true for structured jobs than for unstructured jobs, but within the category of structured jobs the proportion of students planning to continue their high school jobs is highest for skilled trade, followed by factory and health-related work. Apparently, work in certain blue-collar and white-collar jobs performed during school serves as an entry mechanism into the adult labor market, particularly for students who do not obtain further schooling. For these students the findings suggest the importance not only of work itself during high school but also of the type of job held during school since this may also have an effect on the transition to post-adolescent jobs.

Table 4.8 supports this view, in part, by showing the occupational group, in major occupational categories, in which seniors aspire

to be at age 30. Looking across the rows, we find that all students are most likely to aspire to a professional occupation, but students holding blue-collar jobs during school are consistently (across ethnic groups) less likely to do so than others; they are more likely than others to aspire to blue-collar occupations at age 30. This is particularly pronounced in the Hispanic population, followed by white students.

There seems, then, to be some correspondence between job held in school and future outcomes. As noted earlier, college preparatory students are almost absent from blue-collar jobs, and there is a tendency on the part of vocational students to work during school in jobs related to their studies, such as office work and skilled trades. Pulling these things together suggests that for certain students work during high school is part of a broader process of recruitment. More work is needed in this area to define further the different meanings and consequences that work during school has for certain students and to explain how this ties in with the educational process and the process of differentiation in society.

CHAPTER 5

GOVERNMENT-SPONSORED WORK AND TRAINING PROGRAMS

5.1. Sociodemographic Attributes of Participants

A number of government-sponsored programs designed to facilitate the acquisition of work experience by teenagers still in school are now in place. Such initiatives are not new, but the concept of combining work with schooling has taken on a new meaning in recent years. At the turn of the century the educational system was trying to digest the concept of vocationalism and schools were coping with the large number of adolescents who were not in school. Proposals such as part-time schooling and work-study programs, where a student could earn money and remain in school, had many advocates. Such programs were proposed primarily for the financial benefits provided to the student who otherwise would not remain enrolled in school.

Federal initiative in the area of youth employment first took place during the days of the New Deal. The Civilian Conservation Corps and, especially, the National Youth Administration were created to relieve the magnitude of joblessness through work relief programs. These, like earlier attempts at state and local levels, were designed primarily to provide a source of income rather than to educate and train youth. In the past decade, the introduction of the concept of "transition to adulthood" served to focus attention on the preparation of youth for future jobs and the need for positive work experience and training to facilitate the entry of youth into the work force.

Thus, even though current government-sponsored programs are meant primarily for the economically disadvantaged, they are expected

to provide training and teach skills useful for future employment and not to be merely a source of income for the less fortunate. Some other objectives of these programs are: reducing dropout rates, preventing crime, performing needed work for the community, and reducing youth unemployment.

Three major types of government-sponsored programs that provide work experience are available to high school students. Cooperative education is an instructional plan that combines study at school (most often in the vocational track) with regularly supervised employment. Work-study programs are designed to contribute to the incomes of students in need through part-time employment. The Comprehensive Employment and Training Act (CETA), enacted in 1973, and the Youth Employment and Demonstrations Project Act (YEDPA) of 1977 created a number of programs, such as the CETA summer program and the Youth Employment and Training Program, specifically for youth.

Apparently, many high school students, for whom these programs were intended (CETA has one component specifically for in-school youth, and high school students may enroll under other parts of the legislation as well), have never heard of them (table 5.1). Approximately half of the sophomores and over one-third of the seniors have never heard of cooperative education, about a third of the students in each of the cohorts have never heard of the work-study program, and a slightly higher number of students have not heard of CETA. In general, females are slightly better informed than males about the programs, and vocational students are more likely to know about cooperative education and work-study than are general and college preparatory students (tables not presented). The large number of students who have never heard of the programs is quite puzzling. It may be explained in part by the use

TABLE 5.1

PERCENTAGE DISTRIBUTIONS OF CONTACT WITH GOVERNMENT-SPONSORED WORK PROGRAMS, BY TYPE OF PROGRAM AND SCHOOL GRADE: SPRING 1980

Participation	Type of Program		
	Cooperative Education	Work-Study	CETA
Sophomores			
(N)	(3,697,979)	(3,687,466)	(3,673,675)
Total	100.0	100.0	100.0
Never heard of program	51.5	39.5	42.2
Heard of program but did not participate	45.8	55.8	51.8
Participated	2.7	4.7	6.0
Seniors			
(N)	(3,001,915)	(3,001,821)	(3,000,899)
Total	100.0	100.0	100.0
Never heard of program	38.8	29.8	36.0
Heard of program but did not participate	50.7	57.1	55.2
Participated	10.5	13.1	8.8

of different names for the same program in different states or school districts, but there does seem to be a simple lack of information across major population groups.

Participation in the programs increases with age; sophomores are less likely to participate in all programs. Tables 5.2 and 5.3 present the proportion of students who have ever participated in each of the work and training programs. For sophomores, the highest participation is in CETA: 6 percent of the total sophomore population has participated in CETA, but only 2.6 percent in a cooperative-education program, and 4.7 percent in a work-study program. The figures for

TABLE 5.2

SOPHOMORE PARTICIPATION IN GOVERNMENT-SPONSORED WORK PROGRAMS BY MAJOR BACKGROUND CHARACTERISTICS AND TYPE OF PROGRAM: SPRING 1980
(Percent Participating)

Population Group	Type of Program		
	Cooperative Education	Work-Study	CETA
All students	2.6	4.7	5.9
Sex			
Males	3.4	6.4	6.7
Females	1.9	3.1	5.1
Race			
Blacks	3.6	6.6	16.0
Hispanics	2.9	5.4	10.1
Whites	2.4	4.4	3.7
High School Program			
General	2.3	4.5	6.2
College Prepartory ...	1.4	2.5	4.4
Vocational	5.4	9.1	8.4
Family Income			
Less than $12,000	3.0	5.7	13.4
$12,000 to $20,000	.6	4.9	4.9
More than $20,000	2.4	3.9	3.0
Region			
Northeast	1.5	4.3	6.6
South	3.5	6.6	6.1
Northcentral ...	2.3	3.8	5.2
West	1.9	4.0	7.0
Type of Community			
Urban	3.0	4.8	9.0
Suburban	2.2	4.0	4.6
Rural	3.2	6.3	6.4

NOTE: Sophomore population = 3,465,766.

TABLE 5.3

SENIOR PARTICIPATION IN GOVERNMENT-SPONSORED WORK PROGRAMS BY MAJOR BACKGROUND CHARACTERISTICS AND TYPE OF PROGRAM: SPRING 1980
(Percent Participating)

Population Group	Type of Program		
	Cooperative Education	Work-Study	CETA
All students	10.4	13.0	8.5
Sex			
Males	10.5	13.6	8.6
Females	10.2	12.5	8.4
Race			
Black	12.6	15.7	26.0
Hispanic	11.4	15.3	14.7
White	9.7	12.3	5.4
High School Program			
General	9.6	13.0	9.7
College Preparatory ...	4.3	6.4	6.0
Vocational	21.4	24.1	11.5
Family Income			
Less than $12,000	12.5	16.0	21.0
$12,000 to $20,000	10.5	13.8	7.6
More than $20,000	9.2	11.1	4.5
Region			
Northeast	8.7	9.3	7.8
South	13.0	16.3	10.9
Northcentral	12.2	13.7	7.2
West	6.1	12.9	9.0
Type of Community			
Urban	11.2	13.3	11.8
Suburban	10.3	12.3	7.1
Rural	10.5	15.0	9.6

NOTE: Senior population = 2,895,836

senior students were 10.4 percent in a cooperative education program, 13.0 percent in work study, and 8.5 percent in CETA. There are virtually no differences between males and females in the senior cohort, but sophomore males are more likely than females to be in each of the programs. While ethnic differences are quite minor in the cooperative education and work-study programs, blacks are four to five times as likely as whites to have participated in CETA, and Hispanics are about three times as likely as whites. College preparatory students are lowest in participation in each of the programs. Only about 4 to 6 percent of them have participated, whereas over one-fifth of vocational students have been in cooperative education or work-study.

The proportion of students ever participating in CETA is inversely related to family income. The big difference is between students from families earning less than $12,000 and other students: 13 percent of the low-income sophomores and 21 percent of the low-income seniors have participated in CETA, whereas only 5 percent or less of the higher income students have done so. Income differences were much less noticeable in the case of work-study and cooperative education. In all, it is evident that CETA programs are differentiating quite well between ethnic groups and income levels. They are much more likely to accommodate low-income students, blacks, and Hispanics than well-to-do and white students, which suggests that the intent of the programs (at least in this respect) is being carried out. The other two programs--cooperative education and work-study--are clearly in-school programs. Their major target population appears to be the vocational student, who is at least twice as likely as other students to have participated in the programs.

Type of community is weakly related to participation in work programs. Suburban youth are less likely to have been in CETA or a

work-study program, but the differences are quite minor, and likely to be due to socioeconomic differences among the populations of the different community types. It is also difficult to identify a pattern with respect to regions of the country, though some points are worth noting. Students in the South are most likely to participate in each of the programs. Work-study participation is least likely in the Northeast. Students in the West are only half as likely as students in the South and North Central regions to be in a cooperative-education program. One wonders whether this is a result of students' not recognizing the name of the program in that region, or whether in fact the school systems in the West are less likely to make use of this educational tool.

The rates of participation in government-sponsored programs reported by students sampled in this study are quite similar to the rates calculated in 1979 for all youth aged 14 to 21.[1] In 1979, 6.8 percent of all females aged 14 to 21 said they had participated in a government employment and training program (excluding work-study and cooperative education). In the present study, 5.1 percent of sophomore females and 8.4 percent of senior females reported participating in CETA or similar programs. In the case of males the figures were 7.2 percent for all 14- to 21-year-olds in 1979 and 6.7 and 8.6 percent for sophomores and seniors, respectively, in 1980. Since the samples are very different in nature it is hard to arrive at an adequate comparison but, overall, high school students among youth surveyed in 1979 had a participation rate of 7.2 percent in government programs, and the rate for all sophomores and seniors in the present study is 5.9 and 8.5 percent, respectively (excluding cooperative education and work-study). The relationship of family income and ethnicity to participation

[1]See table 5.2, q. 94, in Borus (1980).

is also similar in the two studies, with blacks having the highest participation, followed by Hispanics and whites, and students from higher income families having considerably lower rates of participation than students from low-income families.

Data from the National Longitudinal Study of the High School Class of 1972 (table 5.4) allows assessment of the change that took place over an eight-year period with respect to participation in work and training programs. In 1972, students were asked about participation in cooperative education and the work-study program, which are basically the same in-school programs that exist today. In addition, students were asked about participation in the Neighborhood Youth Corps (NYC), a program that existed before CETA came into being. The Neighborhood Youth Corps program was later incorporated into the CETA legislation, but CETA is much broader and more diverse than the NYC. In comparing the seniors of 1972 and 1980, we find a one-third increase in participation in cooperative education, from about 7.4 percent of the senior students in 1972 to 10.4 percent of the seniors in 1980. The change is smaller for the work-study program (from 10.0 to 13.0 percent) and CETA (from 6.5 to 8.5 percent). The overall increase in CETA participation is surprisingly small, given the enormous expansion of the program since the mid-1970s. It may be that the program is primarily capturing out-of-school youth and that the dramatic growth of the program has thus not affected adolescents still in school. Also, we must remember that the figures are based on student responses, and, with the variety of programs and names that come under CETA legislation, students may have participated in a CETA program without knowing it.[1]

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[1]Of the two possible explanations, the former seems more consistent with data from the DoL/NLS mentioned earlier, since both studies show similar participation rates in government work and training programs.

TABLE 5.4

SUMMARY OF PARTICIPATION IN FEDERAL PROGRAMS FOR SENIORS IN 1972
(Figures in Percentages Except as Noted)

Population Group	Type of Program		
	Cooperative Education	Work-Study	NYC
Sex			
Males	7.77	10.18	6.03
Females	7.21	9.73	7.06
Curriculum			
General	7.30	10.39	8.18
Academic	2.51	3.26	4.46
Vocational-Technical	17.40	22.38	8.61
Race			
White	7.18	9.23	3.89
Black	10.30	16.74	31.07
Excluded classes	8.15	13.16	13.48
All Students	7.62	10.34	7.19
(Number)	204,136	276,783	191,015

SOURCE: Table 5-1 in Reid F. Creech, "A Vocational Re-Evaluation of the Base Year Survey of the High School Class of 1972." Washington, D.C.: Office of Education, Office of Planning, Budgeting, and Evaluation, 1974.

Although increases in participation were evident in most population groups, black seniors seem to be worse off. The proportion of in-school blacks in work-study programs declined slightly, from 16.7 percent in 1972 to 15.7 percent in 1980. In 1972, 31.1 percent of the black students reported participation in the NYC; in 1980 only 26 percent of the black high school seniors reported ever participating in a CETA program. During the same period the proportion of whites and Hispanics in the two programs increased.

5.2. Some Consequences of Participation

The entire range of consequences of participation in work or training programs will unfold in future years. At present it is possible only to distinguish the participants from other working students in their wages, the hours spent at work, and the amount of training as a portion of the time spent on the job. Because the question concerning specific work programs asks about participation at any time in the past, it cannot be directly related to present job characteristics. I therefore use the distinction between those now employed in CETA or other government-sponsored jobs and students working at private jobs. A third category, "other" type of employer, captures all those who work neither in a government program nor for a private firm (e.g., odd jobs). Finally there are those who did not know the type of employer.

Tables 5.5 and 5.6 clearly show the relationship of type of employer to ethnic background and family income. Unfortunately, over half of the sophomores and about 40 percent of the seniors said their employment was neither in a government-sponsored job nor in the private sector, or did not know how to classify their employers. This results

TABLE 5.5

PERCENTAGE DISTRIBUTIONS OF STUDENTS CURRENTLY EMPLOYED, BY TYPE OF EMPLOYER, ETHNICITY, AND SCHOOL GRADE: SPRING 1980

Type of Employer	Black	Hispanic	White
Sophomores			
(N)	(109,078)	(96,664)	(1,035,371)
Total.....	100.0	100.0	100.0
CETA or other government job	22.7	11.5	4.0
Private	17.0	29.9	36.9
Other	32.8	28.0	36.3
Don't know	27.5	30.6	22.8
Seniors			
(N)	(137,943)	(106,520)	(1,368,692)
Total	100.0	100.0	100.0
CETA or other government job	27.8	13.8	5.3
Private	34.9	42.6	58.4
Other	20.6	18.8	17.9
Don't know	16.7	24.7	18.3

TABLE 5.6

PERCENTAGE DISTRIBUTIONS OF STUDENTS CURRENTLY EMPLOYED, BY TY
FAMILY INCOME, AND SCHOOL GRADE: SPRING 1980

Type of Employer	$6,999 or Less	$7,000-$11,000	$12,000-$15,999	$16,000-$19,999	$2 $2
			Sophomores		
(N)	81,348	145,612	216,414	251,254	23
Total	100.0	100.0	100.0	100.0	1
CETA or other government	20.0	12.8	6.5	5.2	
Private	18.2	24.5	30.0	35.4	
Other	27.9	35.1	39.1	35.0	
Don't know	33.9	27.6	24.4	24.4	
			Seniors		
(N)	94,514	174,846	260,342	303,461	30
Total	100.0	100.0	100.0	100.0	1
CETA or other government	28.6	16.3	9.6	5.7	
Private	33.9	43.9	50.6	56.5	
Other	18.4	22.2	19.8	18.0	
Don't know	19.1	17.6	20.0	19.8	

in part from the fact that babysitting and odd jobs are not government sponsored but are not with a private company and are thus legitimately classified as "other" jobs. In addition, it is conceivable that many students simply did not know how to classify their employers. However, the central concern here is with participants in government programs (students' reports are the only measure we have of participation), and the focus will be on this category, with some comparisons to students employed by private companies.

Employed black students in both cohorts were five times as likely as whites to have CETA or other government-sponsored jobs: 22.7 percent of the black sophomores and 27.8 percent of the seniors reported their jobs as CETA-sponsored or otherwise supported by government funds. Only 4 percent of the white sophomores and 5.3 percent of the seniors had such jobs. Hispanic students, somewhere between the other two groups, were only half as likely as blacks to have government-sponsored jobs. Thus, government programs are a major source of employment for black in-school youth, less so for other ethnic groups. Similarly, a much larger proportion of students from low-income families have jobs sponsored by a government program than do higher incomes students: 20 percent of the sophomores who reported their family incomes as less than $7,000 a year had government jobs, as did 28.6 percent of the low-income seniors. These figures decline steadily, reaching 1.9 and 4.3 percent for sophomores and seniors, respectively, where family income is $38,000 or more. These findings are in line with the stated objectives of the programs to concentrate efforts on youth with the greater need of assistance in obtaining a job--low-income and minority populations.

Some consequences of being employed by different types of employers are presented in table 5.7. Wages are slightly lower in the government-sponsored jobs, as are hours worked by senior students. Yet the likelihood of receiving some training on the job is greater in government programs than it is in private companies (at least as reported by students). In comparing the sophomore and senior cohorts, one finds greater age differentiation, with respect to wages and hours worked, in the private sector. In the case of training, the situation is reversed: sophomore and senior students are just as likely to receive training while working for private companies; in government-sponsored

TABLE 5.7

MEAN WAGES, HOURS OF WORK, AND AMOUNT OF TRAINING RECEIVED BY STUDENTS CURRENTLY EMPLOYED, BY TYPE OF EMPLOYER AND SCHOOL GRADE: SPRING 1980

Type of Employer	Mean Wage (Dollars)	Mean Number of Hours Worked per Week	Proportion who Receive Training[a]
Sophomores			
CETA or government job	2.93	15.1	0.18
Private	2.99	15.3	0.15
Other	2.25	9.5	0.07
Don't know	2.65	13.0	0.14
Seniors			
CETA or government job	3.24	17.8	0.22
Private	3.38	20.6	0.15
Other	3.02	16.7	0.14
Don't know	3.25	19.7	0.18

[a]All students who spent one-quarter or more of their time on the job in training were considered to be receiving training.

jobs senior students are about 20 percent more likely than sophomores to receive some training.

It should be noted that the differences in wages, hours worked, and training between government-sponsored and other kinds of jobs may, in some cases, be affected by the population composition of the jobs. Therefore, by way of summary, I present a measure of the impact that the government-sponsored programs have on the wages, hours of work, and training of different population groups. For each population group of interest the measure is simply

$$I = P_g \times \frac{\bar{X}_g}{\bar{X}_t}$$

where I is impact, P_g is the proportion of the population group in a government job, $\bar{X}_g$ is the mean of the job attribute (wage, hours, etc.) for students of that population group who have government jobs, and $\bar{X}_t$ is the mean of the attribute for all employed students in that population group. Rather than looking only at the proportion of those employed in a particular group who have jobs sponsored by government programs, this measure weights the proportion by the ratio of the mean of an attribute for those members of a group in government jobs as compared to the mean of all those in the group. Thus, if the mean hourly wage for whites in government jobs is no different from the mean wage for all employed whites, then $I = P_g$. But if the mean wage is higher in government-sponsored jobs than the overall mean wage for whites, then $I > P_g$, which indicates a higher contribution to the mean wage of the white population than is implied by stating the proportion of whites in government jobs.

Table 5.8 presents the figures for all ethnic and income groups in the sophomore and senior cohorts. It therefore enables us to consider ethnicity and family income at the same time and to look at low-income

TABLE 5.8

CONTRIBUTION OF JOBS IN GOVERNMENT-SPONSORED PROGRAMS TO WAGES, HOURS OF WORK, AND LIKELIHOOD OF TRAINING, BY ETHNICITY, FAMILY INCOME, AND SCHOOL GRADE: SPRING 1980[a]

School Grade	Black		Hispanic		White	
	Low Income[b]	High Income[c]	Low Income	High Income	Low Income	High Income
Hourly Wages						
Sophomores	0.28	0.10	0.21	0.03	0.11	0.02
Seniors	0.40	0.16	0.20	0.09	0.14	0.04
Hours Worked Per Week						
Sophomores	0.32	0.11	0.19	0.02	0.11	0.03
Seniors	0.34	0.18	0.18	0.08	0.11	0.03
Likelihood of Receiving Training						
Sophomores	0.20	0.05	0.37	0.02	0.15	0.02
Seniors	0.33	0.33	0.23	0.21	0.22	0.04

[a]Only currently employed students were included in the calculation.

[b]Low income was defined as less than $12,000 annual income.

[c]High income was defined as more than $25,000 annual income.

minority groups on whom many programs target their efforts. The figure 0.28 for the hourly wages of low-income black sophomores can be interpreted as saying that government-sponsored programs contribute 28 percent toward the hourly wage of this population group. Similarly, they contribute 40 percent toward the mean wages of low-income black seniors. In contrast, the lowest level of impact is found in the case of high-income whites, where government programs contribute only 2 to 4 percent of the wages and training received and hours worked by this population group. In general, the figures for blacks, particularly low-income blacks, are highest, followed by low-income Hispanics. Another way of looking at the table is down the columns. If we take the senior cohort and look at high-income blacks, we find the impact to be 0.16 in the case of wages and 0.18 and 0.33 for hours of work and training, respectively. Since P_g is held constant (we are comparing different job attributes for the same population group), the differences are a result of different ratios of the means of the attribute--wages, hours, training--for those of the population group in government jobs as compared to the means for the population groups as a whole. With the exception of low-income blacks and high-income whites, the measure is higher for training than for wages or weekly hours of work, indicating that government jobs contribute more to the likelihood of training (relative to non-government jobs) than to wages or hours of work, and this is the central characteristic in which they differ from other jobs.

In concluding, then, the findings of this study suggest that, although a large portion of the student population does not have adequate information concerning government-sponsored programs, the programs capture primarily the population groups for which they were created. The programs seem to have a substantial impact on low-income minority

populations, where they contribute between one-fifth and one-third of all hours of work and hourly wages. For most students the relative impact of government jobs on training is stronger than that on wages and hours of work. This suggests that, while wages or work hours offered may not be higher in government programs than in other jobs, for youth, and particularly low-income youth, the programs do offer considerably more training and may in this way better prepare students for the future.

CHAPTER 6

CONCLUSION

This report set out to study the intersection between school and work in one segment of the population. Based on responses from a nationally representative sample of approximately 60,000 high school sophomores and seniors, the report described the extent and nature of employment among students. A number of issues were of special concern, the most general being the meaning of work and the relevance of the labor force framework for high school students. Answers to these questions are normative, in part, and some can only be found in the future, when the students under study become adult members of society. But, as has been shown, some of the issues involved can be addressed with the current dataset, and these are treated in this chapter.

The findings of this study suggest that employment and, more generally, labor force participation are widespread among teenagers, far exceeding what was commonly believed to be the prevalence of these phenomena. While schooling is designated by society as the primary adolescent activity, it is clear that work and secondary education are not mutually exclusive. Moreover, work activity is not confined to any one subgroup of the student population, and it does not appear to be a marginal activity. Approximately 63 percent of the seniors and 42 percent of the sophomores were employed in the week prior to the survey, and even more worked for pay sometime during the school year (62 percent and 74 percent for sophomores and seniors respectively).

If we consider total labor force participation, thus adding to those working the students who did not have a job but were seeking work at the time of the survey, the figures are still higher, reaching 76 percent in the senior cohort. This in itself may not be a strong argument for the relevance of the labor force perspective for youth but it does indicate that the framework should not be rejected on the grounds that employment during high school is infrequent and that it is found only in a marginal segment of this population.

One of the major limitations of the labor force perspective is in defining as employed any person who worked at least one hour for pay during the week. This procedure gives equal weight in the measurement of employment to individuals who work less than 5 hours a week and to those who work more than 35 hours a week. Thus it ignores the variation in investment and commitment of time of different people. The National Commission on Employment and Unemployment Statistics (1979) recently pointed out that the number of persons working short hours is very small and is a declining proportion of the entire labor force and therefore recommended that the current definition of employment be retained as a measure of the total work effort. Yet the case of high school students is quite different, since it is uncommon for individuals of this population group to work full-time, or more than 35 hours a week. The average number of hours worked a week was 12.5 for sophomores and 19.5 for seniors. Although the amount of time students spent at work was by no means trivial (10 percent of the senior students worked more than 35 hours a week) it is considerably less than the amount of time spent at work by other major population groups. The figure for average weekly hours of work

in 1979 was 41.6 for males and 34.5 for females. Even females 65 years old and over (the age group with the lowest average hours of work) worked 25.9 hours a week on average (Hedge and Taylor 1980). Thus in the case of high school students it is especially important, when measuring employment, to take into consideration the hours spent at work; otherwise, the figures, as measures of the total work effort of the population group, can be quite misleading.

Although high school students work less than older members of society, work isn't necessarily a marginal or peripheral activity for them. The time spent at work appears to be second only to the time spent in the classroom. Other activities, such as homework, watching TV, visiting with friends, driving around, reading, and spending time with parents (measured as frequency per week rather than in hours), all seem to take up less of the students' time. Furthermore, the analysis indicated that time spent at work did not come at the expense of other major adolescent activities measured in this study. One interpretation of this finding is that work activity may well be an integral part of adolescence, even as schooling remains the focal activity at this age. Only in the case of senior students, and particularly those who work more than the average number of hours, is work negatively related to other, more typical teenage activities, such as doing homework or watching TV; and these students are those most likely to work full-time upon completion of high school and thus are in the final stages of transition from school to work.

To summarize, then, some caution is advised when using employment statistics to describe the work behavior of teenagers in high school since students work considerably less than "full-time." Nevertheless,

the employment/population ratio provides some indication of exposure to work, and, if interest is focused on work as one of many adolescent activities, we conclude that students--seniors in particular--spend a fairly large number of hours at work, more than on most other activities. In this respect work is not peripheral or incidental for many of the individuals under study. This finding suggests that closer attention to the relationship between school and work is warranted in future studies. In particular, the study of educational achievement as it relates to early work experience, behavior in school and at the work place, and a more detailed look at the role of work in relation to a variety of other adolescent activities would be most enlightening.

Another difficulty in applying the labor force framework to high school teenagers lies in the interpretation of unemployment figures. In the case of adults, and especially heads of households, being unemployed means an inability to perform the role most commonly expected by society. For the overwhelming majority of the population, unemployment also implies economic hardship and difficulty in providing for family needs. For teenagers, schooling is considered the most appropriate activity and being without a job while still in school does not have the same social implications as for adults. In addition, most teenagers are financially supported by their parents and do not rely solely on their own earnings. It has even been argued in the past that the labor force difficulty of youth, as measured by the unemployment rate, may in part be due to the exaggerated expectations of youth and their unwillingness to take jobs offered them. The findings of this study generally show this not to be the case. For all major breakdowns of the population students appeared willing to take jobs at lower than

the minimum wage ($2.74 and $2.94 for sophomores and seniors respectively). It was also found that the reservation wages of the unemployed were not higher than those of employed students, and this did not change when skill differences were taken into account. The pattern among minority students of low employment/population ratios and high unemployment rates (as compared to white students) seems also to indicate that all student groups have a similar tendency toward or interest in being employed (as seen from the labor force participation rates as well), but minority youth are confronted with greater difficulty in obtaining jobs. Although the reasons for this are not clear, these findings show that it is not a result of minority youth having higher wage expectations. As for the consequences of unemployment, the long-term effects (if any) cannot be addressed at this early stage. Yet, unemployment was found to be most frequent among student groups whose families could best benefit from the additional income. For example, the average earnings of black rural seniors could reach as high as $3,500 for working during the entire year, representing approximately one-quarter of their family's earnings. If working year round, urban Hispanics who were seniors in high school could earn $4,000, or 22 percent of their family income. Thus, for some students unemployment represents greater economic hardship than for other students. And in some cases, the unemployment of high school students may have direct welfare implications for their families, in addition to any long-term effects that are a result of the lack of exposure to the world of work and the absence of saleable skills.

In a number of different ways the findings presented in this report indicate that employment is common among high school students and seems to be an integral part of adolescence. The experience

of having responsibility for a set of tasks, associating with adults, learning certain skills, earning money and learning to manage it may all be an important part of growing up and a necessary condition for a smooth transition to adulthood. In this respect the lack of employment, even for those in school, may be a disadvantage particularly for those who do not intend to go on to postsecondary education. As pointed out earlier, certain student groups were less likely to be employed than others, but this was offset in part by government-sponsored programs aimed at assisting those most in need. Among students, the proportion of blacks and Hispanics whose jobs were sponsored by the government was much higher than the proportion of whites, and large differences were found with respect to family income as well. Over one-quarter of the employed seniors from families with income of less than $7,000 had government-sponsored jobs, as compared to 4 percent of students with a family income of $25,000 or more. Although wages were slightly lower in government-sponsored jobs than in private companies, government-sponsored jobs typically provided more training. Interestingly, these findings indicate that the considerable expansion of government-sponsored work and training program for youth during the 1970s had little apparent impact on the overall participation rate of in-school youth. The proportion of senior students who reported participating in a CETA program was only slightly higher than the proportion of seniors who in 1972 were in the Neighborhood Youth Corps. While new programs may have benefited many more out-of-school youth no change is evident in the coverage of in-school youth, even though a number of programs were designed for them and much effort was directed toward increasing school and prime sponsor cooperation.

A final aspect to be considered is the kind of work high school students engage in. We often speak of "typical" teenage jobs--those jobs that are not always viewed as part of the market economy, jobs in which adult members of the labor force are rarely found. Doing odd jobs around the house, mowing lawns, and babysitting are the kinds of activities that come to mind. In this report this group of jobs was called unstructured and distinguished from all other work, referred to as structured. The former are closely related to the functioning of the family and are performed within the household though not necessarily one's own, whereas the latter are typically away from the family in a corporate setting and are part of the functioning of an organization. A major finding of this study was that as early as the sophomore year most jobs held by high school students were structured jobs. Furthermore, a shift seems to take place during the high school years (based on the cohort comparison) in the type of jobs students have. The proportion of students who had unstructured jobs declined from 35 percent among sophomore students to 7 percent among seniors. In the senior year jobs as store clerks and in food service were the most common. Although most teenage jobs are likely to be marginal or peripheral (in the sense in which these terms are used by Sullivan 1978 and Beck, Horan and Tolbert 1978), more often than not these jobs are part of the market economy rather than isolated from it. In this context it should also be noted that the job experience of high school students should not be viewed as homogeneous. Student jobs differed in the number of hours of work they offered (or required) and in the wages they provided. Students in certain jobs, such as skilled trade or health-related jobs, also received considerably more training than other employed students.

Overall, the largest differences in work experience were found between sophomore and senior students. The senior students more closely resembled the adult labor force in every aspect considered in this study. Thus, even while youth are still in school, there appears to be a gradual movement toward greater involvement in work, and any evaluation of the teenage work experience would greatly depend on the particular stage at which it was observed.

APPENDIX A

DEFINITIONS OF CONSTRUCTED VARIABLES

APPENDIX A

DEFINITIONS OF CONSTRUCTED VARIABLES

1. Employment Status

The employment status of participants in this study was defined on the basis of the following questions:

1. Did you do any work for pay last week, not counting work around the house?

2. Were you looking for a job last week?

Employed: Persons working at least one hour for pay during the week prior to the survey (all students who answered yes to the first question regardless of their answer to the second).

Unemployed: Persons who did not work but were seeking work in the week prior to the survey (all students who answered no to the first question and yes to the second question).

Out of the Labor Force: Persons who were neither employed nor unemployed the week prior to the survey (all students who answered no to both questions).

Verifications were made by checking student responses to questions about their weekly earnings and hours of work. Students responding that they had never worked even though they answered yes to question 1 above (about 0.4 percent of the total population) were considered to be out of the labor force.

$$\text{Employment/Population Ratio} = \frac{\text{Total \# Employed}}{\text{Total Population}}$$

$$\text{Participation Rate} = \frac{\text{Total \# Employed + Total \# Unemployed}}{\text{Total Population}}$$

$$\text{Unemployment Rate} = \frac{\text{Total \# Unemployed}}{\text{Total \# Employed + Total \# Unemployed}}$$

2. Ethnicity

The race/ethnicity variable was constructed so that black and Hispanic minority groups would be uniquely identified. Classifications were made on the basis of responses to two questions:

1. What is your race?

2. What is your origin or descent?

Hispanic: All students who marked one of the following categories in the question on origin or descent:

Mexican, Mexican-American, Chicano
Cuban, Cubano
Puerto Rican, Puertorriqueno, or Buricua
Other Latin American, Latino, Hispanic, or Spanish descent

Black: All non-Hispanics who marked black on the question about race.

White and Other: All individuals who marked neither Hispanic nor black.

3. School Program

The school program of an individual was defined on the basis of student responses to the question:

Which of the following best describes your present high school program?

General Program: Students marking "general" in response to the question above.

College Preparatory Program: Students marking "academic or college preparatory."

Vocational Program: Students marking one of the following programs:

Agricultural occupations
Business or office occupations
Distributive education
Health occupations
Home economics occupations
Technical occupations
Trade or industrial occupations

4. Locality (Type of Community)

The student's community type was defined on the basis of information provided on the school universe tape. Each student then received a locality classification corresponding to the community type (urban, suburban, or rural) of the high school he or she attended. No finer breakdown was available.

5. Region

Regional comparisons are based on the following coding:

Northeast: Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island.

Middle Atlantic: New York, Pennsylvania, New Jersey, Delaware.

South Atlantic: Maryland, West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida.

East South Central: Kentucky, Tennessee, Alabama, Mississippi.

West South Central: Oklahoma, Arkansas, Louisiana, Texas.

East North Central: Ohio, Indiana, Michigan, Illinois, Wisconsin.

West North Central: North Dakota, South Dakota, Minnesota, Nebraska, Iowa, Kansas, Missouri.

Mountain: Montana, Wyoming, Idaho, Nevada, Utah, Colorado, Arizona, New Mexico.

Pacific: Washington, Oregon, California, Alaska, Hawaii.

6. Grade Point Average (GPA)

A student's grade point average was derived from their response to the following question:

> Which of the following best describes your grades so far in high school?

		Scale*
1.	Mostly A (a numerical average of 90-100)	9.5
2.	About half A and half B (85-89)	8.7
3.	Mostly B (80-84)	8.2
4.	About half B and half C (75-79)	7.7
5.	Mostly C (70-74)	7.2
6.	About half C and half D (65-69)	6.7
7.	Mostly D (60-64)	6.2
8.	Mostly below D (below 60)	5.7

*For the purpose of regression analysis, these categories were recoded as numerical grades on a scale from 1 to 10 using the midpoints of the categories.

7. Occupational Expectations at Age 30

The job classifications included in the five categories of occupational expectations are listed below:

Blue Collar: Craftsman, laborer, operative, service.

White Collar: Clerical, sales, technical.

Professional: Professional I, professional II, school teacher.

Managerial: Farmer, farm manager, manager, administrator, proprietor or owner.

Other: Homemaker, housewife, military, protective service, not working.

8. Present Job

The job classifications used to distinguish unstructured vs. structured jobs currently held by the participants are listed below:

Blue Collar: Farm or agricultural work, factory work (unskilled or semi-skilled), skilled trade, other manual labor.

White Collar: Store clerk or salesperson, office or clerical, hospital or health.

Food: Waiter or waitress.

Unstructured: Lawn work or odd jobs, babysitting or child care.

Other: Other.

APPENDIX A

ADDITIONAL FIGURES AND TABLES

TABLE B.1

LABOR FORCE STATISTICS OF SOPHOMORES AND SENIORS, BY MONTH OF SURVEY: SPRING 1980

Time of Survey	Labor Force Participation Rate	Employment/ Population Ratio	Unemployment Rate
	Sophomores		
February	55.4	41.0	26.0
March	58.8	41.9	28.8
April or May	61.1	42.6	30.3
	Seniors		
February	75.7	63.6	16.0
March	76.4	63.5	16.9
April or May	75.4	61.6	18.3

TABLE B.2

LABOR FORCE PARTICIPATION RATE, BY COHORT, REGION AND ETHNICITY: SPRING 1980

Region[a]	Labor Force Participation Rate			
	Total	Black	Hispanic	White
Sophomores				
Northeast	64.4	67.3	58.7	64.5
Middle Atlantic	57.0	52.7	57.3	57.9
South Atlantic	55.2	53.2	56.9	55.8
East South Central	50.6	52.5	62.0	49.6
West South Central	55.0	51.4	52.3	56.6
East North Central	60.1	60.4	59.5	60.1
West North Central	63.4	64.8	*	63.1
Mountain	60.2	61.7	55.6	61.3
Pacific	59.8	54.2	57.4	60.7
Seniors				
Northeast	79.2	75.6	80.5	79.3
Middle Atlantic	76.6	66.6	77.6	78.0
South Atlantic	72.0	71.1	77.6	71.9
East South Central	71.3	71.8	74.8	71.0
West South Central	71.6	65.0	71.5	73.1
East North Central	79.6	73.7	77.5	80.2
West North Central	77.9	81.8	80.9	77.4
Mountain	75.2	72.4	68.9	76.8
Pacific	76.7	74.6	73.8	77.3

NOTE: Sophomore population = 3,143,744.
Senior population = 2,627,925.

*Number of cases too small for calculating the rate.

[a]See appendix A for list of States in each region.

TABLE B.3

LABOR FORCE PARTICIPATION RATE OF SOPHOMORES AND SENIORS, BY TYPE OF COMMUNITY AND ETHNICITY: SPRING 1980

Type of Community	Labor Force Participation Rate			
	Total	Black	Hispanic	White
Sophomores				
Urban	57.9	57.9	54.8	58.7
Suburban	60.0	54.7	58.4	60.8
Rural	55.9	47.0	57.7	56.7
Seniors				
Urban	76.5	73.2	74.2	78.1
Suburban	78.1	70.9	73.8	79.0
Rural	72.4	65.1	77.3	72.8

NOTE: Sophomore population = 3,136,064.
Senior population = 2,627,925.

TABLE B.4

NUMBER OF HOURS SPENT DOING HOMEWORK EACH WEEK BY NUMBER OF HOURS SPENT AT WORK, SCHOOL GRADE, ETHNIC GROUP AND SEX: SPRING 1980

Number of Hours Spent at Work	Male			Female		
	Black	Hispanic	White	Black	Hispanic	White
Sophomores						
None	3.1	3.3	4.2	4.0	3.9	4.5
1 to 4 hours ..	3.4	3.1	3.9	3.9	3.5	4.9
5 to 21 hrs. ..	3.4	3.0	3.6	4.2	3.7	4.5
22 to 34 hrs...	3.6	3.3	2.9	4.8	4.3	4.4
35 hrs. or more	4.4	3.0	3.5	5.1	3.7	4.5
Seniors						
None	3.9	3.3	4.3	4.3	3.3	4.9
1 to 4 hours ..	3.2	3.1	3.8	3.0	2.6	4.8
5 to 21 hrs. ..	3.5	3.2	3.5	4.4	3.8	4.3
22 to 34 hrs. .	3.5	3.0	2.9	4.0	3.7	3.8
35 hrs. or more	3.2	2.6	3.0	4.1	3.2	4.3

TABLE B.5

NUMBER OF HOURS SPENT WATCHING TV EACH WEEK, BY NUMBER OF HOURS SPENT AT WORK, SCHOOL GRADE, ETHNIC GROUP AND SEX: SPRING 1980

Number of Hours Spent at Work	Male			Female		
	Black	Hispanic	White	Black	Hispanic	White
Sophomores						
None	21.1	19.0	18.3	19.7	17.3	16.5
1 to 4 hours ..	20.0	17.7	17.5	20.4	17.5	15.9
5 to 21 hrs. ..	20.6	17.3	17.0	20.1	15.7	15.7
22 to 34 hrs. ..	21.4	15.9	16.2	22.5	16.6	15.6
35 hrs. or more.	19.5	17.0	16.8	20.0	14.3	16.9
Seniors						
None	18.1	16.2	15.9	19.9	16.4	16.0
1 to 4 hours ..	16.9	15.2	13.8	18.9	13.1	14.3
5 to 21 hrs. ..	17.0	15.3	13.5	19.4	14.1	13.5
22 to 34 hrs. ..	17.8	15.5	13.0	18.3	15.0	12.8
35 hrs. or more.	16.8	15.6	12.7	18.3	14.5	12.7

TABLE B.6

PROPORTION OF SOPHOMORE AND SENIOR STUDENTS IN UNSTRUCTURED[a] JOBS, BY ETHNICITY, TYPE OF COMMUNITY AND FAMILY INCOME: SPRING 1980

Ethnicity	Type of Community	Family[b] Income	Sophomores	Seniors	Sr./Soph.
			In Unstructured Jobs	In Unstructured Jobs	In Unstructured Jobs
All students			45.2	8.0	.18
Blacks			47.6	9.8	.21
Blacks	Urban	Low	46.3	7.8	.17
Blacks	Urban	High	44.5	10.7	.24
Blacks	Suburban	Low	55.3	10.1	.18
Blacks	Suburban	High	47.8	9.5	.20
Blacks	Rural	Low	49.7	13.8	.28
Blacks	Rural	High	48.9	6.2	.13
Hispanics			32.8	7.3	.22
Hispanics	Urban	Low	41.1	5.3	.13
Hispanics	Urban	High	24.6	8.0	.33
Hispanics	Suburban	Low	29.0	11.8	.41
Hispanics	Suburban	High	41.1	6.8	.17
Hispanics	Rural	Low	39.1	15.5	.40
Hispanics	Rural	High	23.2	3.5	.15
Whites			46.0	7.9	.17
Whites	Urban	Low	35.5	8.7	.25
Whites	Urban	High	46.0	7.5	.16
Whites	Suburban	Low	53.5	10.9	.20
Whites	Suburban	High	48.3	7.0	.14
Whites	Rural	Low	45.6	12.7	.28
Whites	Rural	High	41.8	8.1	.19

[a] Includes students who did babysitting or had odd-jobs.

[b] Low-income families are families below the 20th percentile on the income distribution. All others are referred to as high-income families.

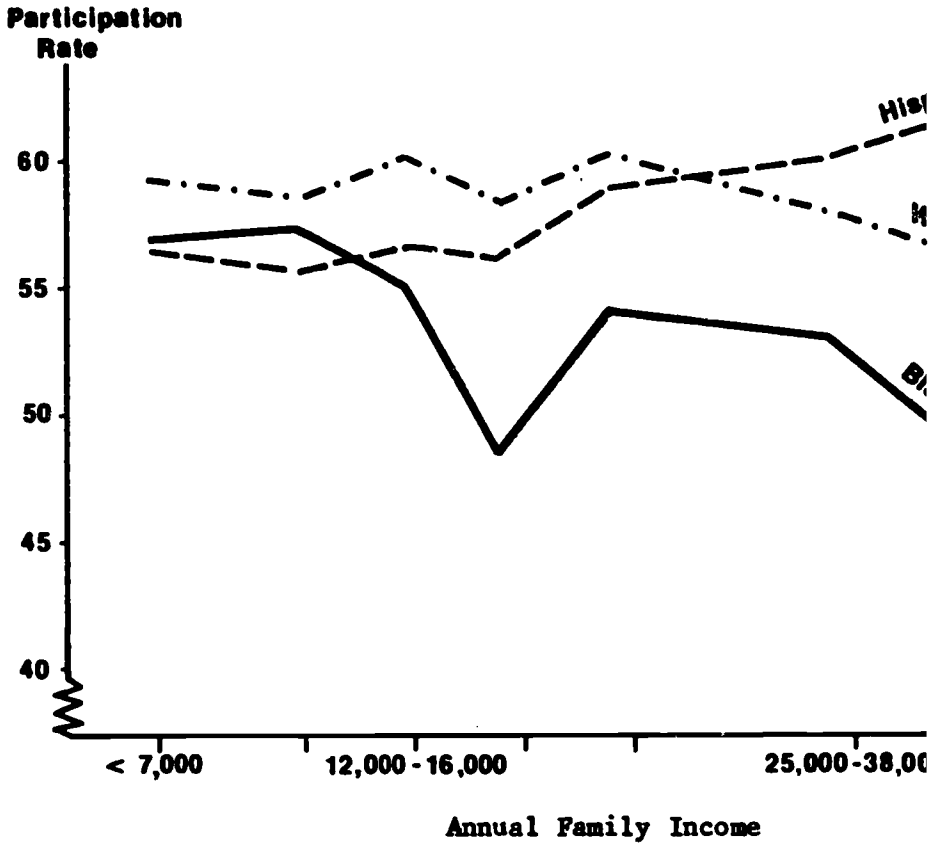

Fig. B.1. The labor force participation rate of
by ethnicity and family income: Spring 1980

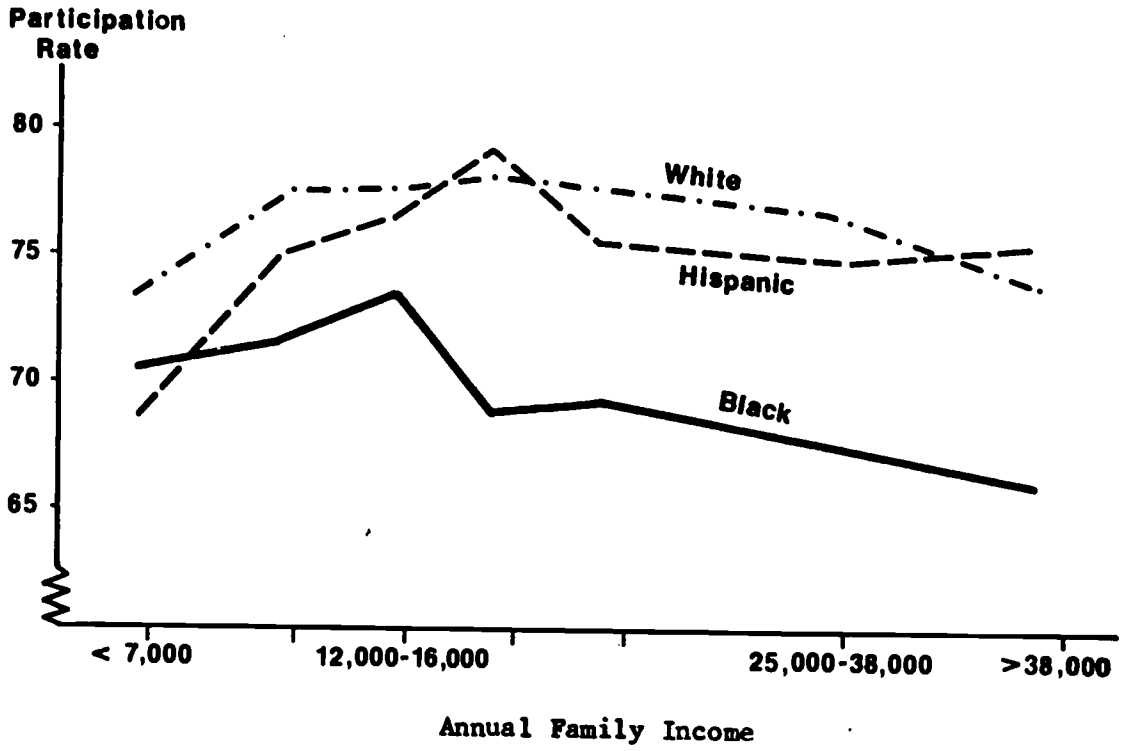

Fig. B.2. The labor force participation rate of seniors, by ethnicity and family income: Spring 1980

APPENDIX C

ORDINARY LEAST SQUARE MODELS USED FOR CALCULATING ADJUSTED DIFFERENCES IN PARTICIPATION RATES, EMPLOYMENT RATIOS AND UNEMPLOYMENT RATES IN CHAPTER 2

TABLE C.1

MEAN AND STANDARD DEVIATION FIGURES FOR VARIABLES INCLUDED IN THE REGRESSION MODELS OF PARTICIPATION RATE AND EMPLOYMENT RATIO, BY GRADE: SPRING 1980

Variable	Sophomores		Seniors	
	Mean	Standard Deviation	Mean	Standard Deviation
In the labor force[a]	0.584	0.49	0.763	0.42
Employed[a]	0.421	0.49	0.633	0.48
Female[a]	0.498	0.51	0.511	0.50
Black[a]	0.100	0.30	0.090	0.28
Hispanic[a]	0.073	0.26	0.059	0.23
Age	15.474	1.26	17.485	0.62
Family income (in $10,000 units)	2.090	1.14	2.231	1.18
Square of Family income	5.659	5.92	6.367	6.28
Living in the South[a]	0.326	0.47	0.304	0.46
Rural community[a]	0.314	0.46	0.314	0.46
Suburban community[a]	0.478	0.50	0.494	0.50
In vocational program[a]	0.194	0.39	0.236	0.42
In college preparatory program[a]	0.346	0.48	0.391	0.49
Total sample size	23,209		23,574	

[a]Since these variables receive a (1) if true and (0) otherwise, the mean represents the proportion of the population in that category.

TABLE C.2

THE LIKELIHOOD OF PARTICIPATION IN THE LABOR FORCE, FOR SOPHOMORE AND SENIOR STUDENTS: SPRING 1980

(unstandardized regression coefficients[a])

Explanatory Variables	Sophomores	Seniors
Female	-6.40 (-9.93)	-3.63 (-6.41)
Ethnic group		
Black	-5.10 (-4.47)	-6.57 (-6.43)
Hispanic	-3.93 (-3.44)	-3.30 (-2.78)
Age	1.82 (7.07)	-0.00 (-0.02)
Family income[b]	2.74 (2.39)	4.56 (3.58)
Square of income	-0.71 (-3.28)	-0.83 (-4.51)
Living in South	-4.48 (-6.36)	-4.71 (-7.67)
Type of community		
Rural	-2.88 (-3.10)	-4.56 (-5.62)
Suburban	2.29 (2.64)	1.00 (1.33)
School program		
Vocational	3.33 (3.82)	5.34 (7.38)
College preparatory	-4.14 (-5.42)	-2.70 (3.98)
Intercept	41.04	82.24
R^2	0.03	0.02

NOTE: Student's t values are in parentheses. Figures larger than 2.58 are significant at $\alpha = 0.01$

[a]Coefficients are multiplied by 100 to better correspond to figures of employment statistics in earlier sections.

[b]Family income is in $10,000 units.

TABLE C.3

THE LIKELIHOOD OF EMPLOYMENT FOR SOPHOMORES AND SENIORS: SPRING 1980
(unstandardized regression coefficients[a])

Explanatory Variables	Sophomores	Seniors
Female	-4.07 (-6.28)	-4.34 (-6.78)
Ethnic group		
Black	-13.00 (-11.34)	-14.76 (-12.75)
Hispanic	-8.52 (-6.72)	-5.42 (-4.04)
Age	1.27 (4.91)	-0.00 (-0.12)
Family income[b]	5.54 (4.81)	4.76 (4.23)
Square of income	-1.05 (-4.83)	-0.09 (-4.35)
Living in South	-3.62 (-5.12)	-3.97 (-5.70)
Type of Community		
Rural	2.11 (2.25)	-2.90 (-3.15)
Suburban	3.59 (4.11)	2.17 (2.54)
School program		
Vocational	3.19 (3.64)	6.76 (8.25)
College preparatory	-2.55 (-3.32)	-3.12 (-4.06)
Intercept	24.00	68.42
R^2	0.04	0.06

NOTE: Student's t-values are in parentheses. Figures larger than 2.58 are significant at $\alpha = 0.01$.

[a]Coefficients are multiplied by 100 to better correspond to figures of employment statistics.

[b]Family income is in $10,000 units.

TABLE C.4

MEAN AND STANDARD DEVIATION FIGURES FOR VARIABLES INCLUDED IN THE REGRESSION MODELS OF UNEMPLOYMENT, BY GRADE: SPRING 1980

Variable	Sophomores		Seniors	
	Mean	Standard Deviation	Mean	Standard Deviation
Unemployed[a]	0.278	0.45	0.170	0.37
Female[a]	0.468	0.51	0.497	0.50
Black[a]	0.093	0.29	0.082	0.27
Hispanic[a]	0.071	0.26	0.058	0.23
Age	15.520	1.38	17.488	0.61
Family income (in $10,000 units)	2.074	1.12	2.224	0.23
Square of family income	5.549	5.79	6.297	6.20
Living in the South[a]	0.306	0.46	0.288	0.45
Rural community[a]	0.299	0.46	0.299	0.45
Suburban community[a]	0.494	0.50	0.507	0.50
In vocational program[a]	0.210	0.41	0.253	0.43
In college preparatory program[a]	0.319	0.47	0.373	0.48
Total sample size[b]	13,346 cases		17,701 cases	

[a]Since these variables receive a (1) if true and (0) otherwise, the mean represents the proportion of the population in that category.

[b]Only students who were in the labor force (working or seeking work) were included in this analysis.

TABLE C.5

THE LIKELIHOOD OF UNEMPLOYMENT FOR SOPHOMORE AND SENIOR STUDENTS: SPRING 1980

(unstandardized regression coefficients[a])

Explanatory Variables	Sophomores	Seniors
Female	-1.40 (-1.83)	1.15 (2.02)
Ethnic group		
Black	17.74 (12.54)	13.75 (12.71)
Hispanic	10.76 (7.08)	4.07 (3.34)
Age	0.19 (0.69)	0.21 (0.44)
Family income[b]	-6.26 (-4.58)	-2.56 (-2.49)
Square of income	0.91 (3.49)	0.30 (1.59)
Living in South	0.03 (0.40)	-0.11 (-0.18)
Type of community		
Rural	-7.35 (-6.55)	-1.36 (-1.63)
Suburban	-3.09 (-2.97)	-1.61 (-2.10)
School program		
Vocational	-1.34 (-1.32)	-2.99 (-4.13)
College preparatory	-2.62 (-2.94)	-0.21 (-0.32)
Intercept	37.10	16.[illegible]
R^2	0.09	0.05

NOTE: Student's t-values are in parentheses. Figures larger than 2.58 are significant at $\alpha = 0.01$.

[a]Coefficients are multiplied by 100 to better correspond to figures of employment statistics.

[b]Family income is in $10,000 units.

APPENDIX D

ORDINARY LEAST SQUARE MODELS USED FOR CALCULATING ADJUSTED DIFFERENCES IN WAGES AND RESERVATION WAGES IN CHAPTER 3

TABLE D.1

MEAN GRADE POINT AVERAGE AND STANDARD DEVIATIONS FOR SOPHOMORES AND SENIORS, BY EMPLOYMENT STATUS: SPRING 1980

Employment Status	Sophomores		Seniors	
	Mean	Standard Deviation	Mean	Standard Deviation
Males:				
Employed	7.9	0.9	7.7	0.8
Unemployed	7.7	0.9	7.9	0.8
Out of the labor force	7.9	1.0	8.1	0.8
Females:				
Employed	8.1	0.9	8.2	0.8
Unemployed	7.8	0.9	8.1	0.7
Out of the labor force	8.1	0.9	8.3	0.8

TABLE D.2

REGRESSION MODELS USED TO PREDICT RESERVATION WAGES WHEN GRADE POINT AVERAGE IS INCLUDED, FOR SOPHOMORE AND SENIOR MALES, BY EMPLOYMENT STATUS: SPRING 1980

Employment Status	Sophomores	Seniors
Employed:		
Grand point average	$-0.04_{(-4.53)}$	$-0.01_{(-1.70)}$
Intercept	3.12	3.19
Unemployed:		
Grade point average	$0.01_{(0.93)}$	$-0.00_{(-0.28)}$
Intercept	2.93	3.00
Out of labor force:		
Grade point average	$-.003_{(-2.63)}$	$-0.00_{(-0.03)}$
Intercept	2.93	3.00

TABLE D.3

REGRESSION MODELS USED TO PREDICT RESERVATION WAGES WHEN GRADE POINT AVERAGE IS INCLUDED, FOR SOPHOMORE AND SENIOR FEMALES, BY EMPLOYMENT STATUS: SPRING 1980

Employment Status	Sophomores	Seniors
Employed:		
Grade point average	$-0.09_{(-7.04)}$	$-0.04_{(-4.98)}$
Intercept	3.05	3.20
Unemployed:		
Grade point average	$-0.07_{(-3.88)}$	$-0.09_{(-5.48)}$
Intercept	3.15	3.54
Out of the labor force:	$-0.09_{(-7.87)}$	$-0.07_{(-5.25)}$
Intercept	3.17	3.31

TABLE D.4

MEAN AND STANDARD DEVIATION FIGURES FOR VARIABLES INCLUDED IN THE REGRESSION MODELS FOR RESERVATION WAGES, BY GRADE: SPRING 1980

Variable	Sophomores		Seniors	
	Mean	Standard Deviation	Mean	Standard Deviation
Reservation wage	2.60	0.69	2.95	0.53
Female[a]	0.52	0.50	0.52	0.50
Black[a]	0.11	0.31	0.10	0.29
Hispanic[a]	0.07	0.26	0.06	0.24
Age	15.56	0.68	17.49	0.63
Family income (in $10,000 units)	2.08	1.14	2.22	1.19
Living in the West[a]	0.18	0.38	0.18	0.38
Urban community[a]	0.22	0.42	0.20	0.40
Suburban community[a]	0.47	0.50	0.49	0.50
In vocational program[a]	0.20	0.40	0.24	0.43
In college preparatory program[a]	0.32	0.47	0.37	0.48
Grade point average[b]	7.90	0.85	8.08	0.78
Total sample size	30,184		28,465	

[a]Since these variables receive a (1) if true and (0) otherwise, the mean represents the proportion of the population in that category.

[b]See appendix A for a description of this variable.