

Chapter 7

Progress in Schooling

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It is far from creditable that in hardly a city in the country can the school authorities tell how many pupils begin each school year, or how fast they advance, or what proportion finish or why they fall out, or where and why they lose time.

—Leonard P. Ayres, *Laggards in Our Schools* (1909, 7)

Much as age-grading changed the definition of a quality school system from one with high rates of failure to one with high rates of promotion, so in the 1940s, educators began to adopt the idea that automatic promotion, or as it would later be called “social promotion,” of virtually all students was the sign of true educational quality.

—David Angus, Jeffrey Mirel, and Maris Vinovskis, “Historical Development of Age Stratification in Schooling” (1998)

This chapter reviews measures, trends, and differentials in grade retention and dropout in American elementary and secondary schools from the early 1970s to the late 1990s. Differentials in grade retention and school dropout reflect social and economic inequalities and, for that reason, may have been affected by the rise of income and wealth inequality in and after the 1970s. However, there appears to be more evidence of stability than of change in the effects of social origins on progress through elementary and secondary school. The distribution of progress through school has been altered by changes in the distribution of social origins, but there have been no large changes in the effects of social and economic origins. Grade retention and dropout—and socioeconomic differentials in them—may also be sensitive to changing national and state educational policies, and the following discussion highlights their connections. Even if the rising economic inequality of the past three decades has not led to larger socioeconomic differentials in progress through school, the pace and scope of school reform around the turn of the century may lead to such changes. Thus, it is instructive to review the progress of American students through elementary and secondary school across the past three decades to provide a baseline for an assessment of future trends, as well as to assess the consequences of the past growth of inequality.

The combination of grade retention and dropout in this review may seem artificial. However, their intimate relationship was well understood almost a century ago by Leonard P. Ayres, one of the early social researchers supported by the Russell Sage Foundation:

We may now consider the relation which such low percentages of promotion have to retardation and the evil which is its corollary—elimination. It is apparent

that if considerable numbers of the children entering school fail to be advanced regularly, the lower grades will become abnormally swollen by the damming of the stream of pupils through them. Experience teaches us, too, that in the upper grades the pupils who have advanced slowly and so are over-age will drop out before completing the course, thus making these grades abnormally small. . . . Retardation results in elimination. (Ayres 1909, 139–40)

Across the past century, throughout the unprecedented expansion of the American educational system, the inescapable problem of balancing socialization and selection through the schools has played out through increases in age-grading and observable variations in the pace of progress through schools and in rates and patterns of school-leaving.¹ As age at entry to regular schooling declined and age at school-leaving increased, the focus of public concern with trade-offs between socialization and selection gradually shifted from the lower to the higher grades—from completion of the elementary grades to high school completion (Duncan 1968; National Research Council 1989). Although this chapter focuses on the processes leading to high school completion—or its absence—the recent, massive increase in transitions to postsecondary schooling raises the same questions in somewhat altered form.² Who should attend college, and what role should society play in influencing college-going decisions? Which students should receive financial help in postsecondary schooling? How should financial support for postsecondary schooling be organized? How—if at all—should colleges accommodate their programs to students with varying levels of educational preparation? What is the appropriate pace for students making their way through the college years?

The language of the contemporary debate about the success or failure of schools substitutes “high standards” for socialization and “dropout” for selection, and there are real differences in their meanings and those of the corresponding terms, “retardation” and “elimination,” that accompanied educational debate a century ago (Ayres 1909). Several common themes persist. A larger share of children should complete the course of study. Universal school completion supports democratic values and improves labor market chances. Schooling is a production process that can be improved in all respects by scientific knowledge and businesslike administration. Gender, health, race-ethnic origins, immigrant status, social background, and residential stability all affect progress through schooling. Too many students learn that they are failures in school, and retention in grade leads to early school-leaving. Local school authorities fail to collect data adequate to diagnose or solve the problems of failure and attrition in their schools. Problems of data availability are compounded by erroneous assumptions and poor analyses of available data. A thorough reading of Ayres’s (1909) *Laggards in Our Schools*—which is, I think, far more often cited than read—could leave one feeling that contemporaneous research and policy debates exemplify “déjà vu all over again.”

To be sure, there are real³ and substantial differences in contemporary distributions and processes of school completion, not least among which are that elementary schooling is essentially universal among persons born in the United States, that high school completion, in some form, is nearly universal, and that postsecondary schooling awaits a large majority of high school graduates. In the case of elementary and secondary schooling, the most visible goal of policymakers and advocates has changed from school completion to academic achievement—that is, from selection to socialization—and much of the educational debate focuses on the use of standardized tests to assess and certify success in schooling. A century ago there was no parallel to the contemporary advocacy of publicly funded alternatives to

public common schools. While both economic and political goals for schooling have persisted, there has been a shift in the primary emphasis—from preparation for membership in a democratic society to preparation for work in a globally competitive labor market.

Data and analytic resources are in many respects far superior to those of a century ago. One improvement is the ability to track individual progress through schools across time, both in samples and in whole populations. A second is the availability, across a wide span of years, of comparable and detailed social and economic characteristics of current and former students. Educational goals, policies, and resources, as well as data about the process of schooling, now come increasingly from national sources—including not just the federal government but nationally based advocacy organizations and a few dominant commercial suppliers of educational textbooks and achievement tests. Yet the limits of our present understanding of persistence and success in elementary and secondary schooling are amply illustrated by the fact that there is no consensus about the extent of high school completion among population groups and across localities (Greene 2002), nor even about the desirability or feasibility of universal high school completion (Hayward 2000).³

RETENTION IN GRADE

Retention in grade was not a highly visible issue in American education from the late 1940s to the early 1990s. It was a variable local educational practice, not a recognizable tool of educational policy at the district, state, or federal level (American Federation of Teachers 1997). In 1998 President Clinton made high standards for promotion a cornerstone of his educational policy goals for the nation. Clinton combined a demand for high-stakes testing of individual students with a call for “an end to social promotion.” In a memorandum to the secretary of education, President Clinton (1998, 1–2) wrote that he had “repeatedly challenged States and school districts to end social promotions—to require students to meet rigorous academic standards at key transition points in their schooling career, and to end the practice of promoting students without regard to how much they have learned. . . . Students should not be promoted past the fourth grade if they cannot read independently and well, and should not enter high school without a solid foundation in math. They should get the help they need to meet the standards before moving on.” In his 1999 State of the Union address, the president reiterated the proposal—to sustained applause—by calling for legislation to withhold federal education funds from school districts practicing social promotion. In October 1999, President Clinton told a summit meeting of political and business leaders that “students who are held back because they fail to vault newly raised bars should be treated with tough love. . . . Look dead in the eye some child who has been held back and say, ‘This doesn’t mean there’s something wrong with you, but we’ll be hurting you worse if we tell you you’re learning something when you’re not.’” (Steinberg 1999).

The Clinton administration’s proposals for educational reform strongly tied the ending of social promotion to early identification and remediation of learning problems. The president called for smaller classes, well-prepared teachers, specific grade-by-grade standards, challenging curriculum, early identification of students who need help, after-school and summer school programs, and school accountability. He also called for “appropriate use of tests and other indicators of academic performance in determining whether students should be promoted” (Clinton 1998, 3).

The subsequent rush to embrace high-stakes testing for promotion or retention would have been comic at times had it not had serious implications for the future of millions of children and youth. In Atlanta, Georgia, the school board fired its superintendent for refus-

ing to implement a policy of failing any student whose test scores were below average. The state superintendent of schools in Louisiana declared that the state was not failing a large enough share of students early enough in their careers, yet the state of Louisiana was already leading the nation, both in grade retention and high school dropout. When asked about the use of the Iowa Test of Basic Skills to retain students in the Chicago Public Schools, the chief accountability officer told a panel of the National Research Council that, as long as the *Chicago Tribune* backed the testing program, “we are committed to use the Iowa forever and ever” (National Research Council 1999, 31).

In Texas, then-Governor George W. Bush proposed that “3rd graders who do not pass the reading portion of the Texas Assessment of Academic Skills would be required to receive help before moving to regular classrooms in the 4th grade. The same would hold true for 5th graders who failed to pass reading and math exams and 8th graders who did not pass tests in reading, math, and writing. The state would provide funding for locally developed intervention programs” (Johnston 1998). As president, through his support for the No Child Left Behind Act (U.S. Congress 2002), Bush has largely succeeded in initiating—on a large scale—many of the educational policy changes that were denied his predecessor.

The new federal legislation mandates the administration of state-developed achievement tests to every schoolchild from the third through the eighth grades, and there is every likelihood that these tests will be used to retain students in grade as well as to diagnose what they know and can do. While section 1111 of the No Child Left Behind Act specifically does not *require* the use of tests as promotion or graduation criteria (U.S. Congress 2002, 1444), neither does it discourage such use. The recent history of testing suggests that, if tests are given, they will be used to make decisions about students (National Research Council 1999; Linn 2000). Section 1240 includes a requirement that states provide information about children’s promotion or retention as an indicator of “program quality” (1566). Section 1503 requires the secretary of education to “conduct an independent study of assessments used for State accountability purposes and for making decisions about the promotion and graduation of students” (1597).

Measurement of Grade Retention

The main federal source of information about education, the National Center for Education Statistics (NCES), provides essentially no statistics about grade retention or social promotion. For example, there are no data on this subject in current editions of its two major statistical compendiums, the *Digest of Education Statistics* (National Center for Education Statistics 2002b) and *The Condition of Education* (National Center for Education Statistics 2002a).⁵

No federal or independent agency monitors social promotion and grade retention. Occasional data on retention are available for some states and localities, but coverage is sparse, and little is known about the comparability of these data (Shepard and Smith 1989). For example, the denominators of retention rates may be based on beginning-of-year or end-of-year enrollment figures. The numerators may include retention as of the end of an academic year or as of the end of the following summer session. Some states include special education students in the data; others exclude them. In the primary grades retention is usually an all-or-nothing matter; in high school retention may imply that a student has completed some requirements but has too few credits to be promoted. Some states do not collect retention data at all or collect very limited data.⁶

There might appear to be a contradiction between high rates of retention in grade and

the widespread belief—common among teachers as well as the general public—that poorly performing students regularly pass from one grade to the next. That need not be the case. As Leonard Ayres understood, seemingly modest grade-level retention rates have a large cumulative impact on progress through school (1909, 141–49). For example, each year Texas reports retention rates separately by grade level and race-ethnicity. Retention rates have been stable since 1990, well before the new initiatives to “end social promotion.” The retention rate is typically about 6 percent in the first grade and 1 to 3 percent in other elementary grades. Retention rates peak at about 18 percent⁶ in the ninth grade but fall off quickly thereafter to 8 percent, 5.5 percent, and 4.5 percent in the tenth to twelfth grades (Texas Education Agency 2001, 72–74). If all Texas students were subject (at random) to the failure rates of 1996 to 1997, 17 percent would fail at least once between the first and eighth grades, and 32 percent would fail at least once between the ninth grade and high school completion (Texas Education Agency 1998). Among African American students, the corresponding rates are 20 percent and 42 percent, and among Hispanic students they are 21 percent and 44 percent.⁷

The recent public discussion of “social promotion” has made little reference to past or current retention practices, and one might easily gain the impression that, until the recent reforms, almost no students had been retained in grade. In fact, while retention practice has varied across time and place, grade retention is and has been pervasive in American schools. Ignorance about the practice of grade retention may be due in part to sporadic data collection and reporting, but far more consistent statistical data are available about the practice of grade retention than, say, about academic tracking. It is possible to describe rates, trends, and differentials in grade retention using data from the U.S. Census Bureau, but these data have not been widely used.

Weak inferences about the extent of grade retention may be obtained from historic data on educational attainment by age. For example, in the census of 1940, 17.6 percent of seven-year-olds had not completed any school, 31.5 percent of eight-year-olds had not completed more than the first grade, and 46.3 percent of twelve-year-olds had not completed more than the fifth grade (U.S. Department of Commerce 1943, table 2). Similar inferences may be drawn from a table based on the U.S. Census Bureau’s Current Population Surveys (CPS) of 1964 through 1966 that shows age by year of school in which students are enrolled (U.S. Department of Commerce 1967, table 9). During this period 5.1 percent of six-year-olds had not yet entered the first grade, 11.7 percent of seven-year-olds had not yet entered the second grade, and 20.5 percent of eleven-year-olds had not yet entered the sixth grade. In each of these cases, we infer that the increase with age in grade completion or enrollment below the modal level implies grade retention. However, the inferences are weak because they are based on comparisons of birth cohorts in cross-section and because age at school entry varies across cohorts, especially in the earlier period. All the same, the data appear to show substantial increases in grade retardation as children age, presumably caused by grade retention.

The best source of current information on levels, trends, and differentials in grade retention is the annual October school enrollment supplement to the monthly Current Population Survey.⁸ Using published data from the annual October supplements, it is possible to track the distribution of school enrollment by age and grade each year for groups defined by sex and race-ethnicity.⁹ These data have the advantage of comparable national coverage from year to year, but they say nothing directly about educational transitions or about the role of specific educational practices, such as high-stakes testing, in grade retention.¹⁰ We can only infer the minimum rate of grade retention by observing changes in the

enrollment of children below the modal grade level for their age from one calendar year to the next. Suppose, for example, that 10 percent of six-year-old children were enrolled below the first grade in October 1994. If 15 percent of those children were enrolled below the second grade in October 1995, when they were seven years old, we would infer that at least 5 percent were held back in the first grade between 1994 and 1995. Using this approach, I briefly review trends and differentials in retention, as indicated by age-grade retardation.

Trends and Differentials in Age-Grade Retardation

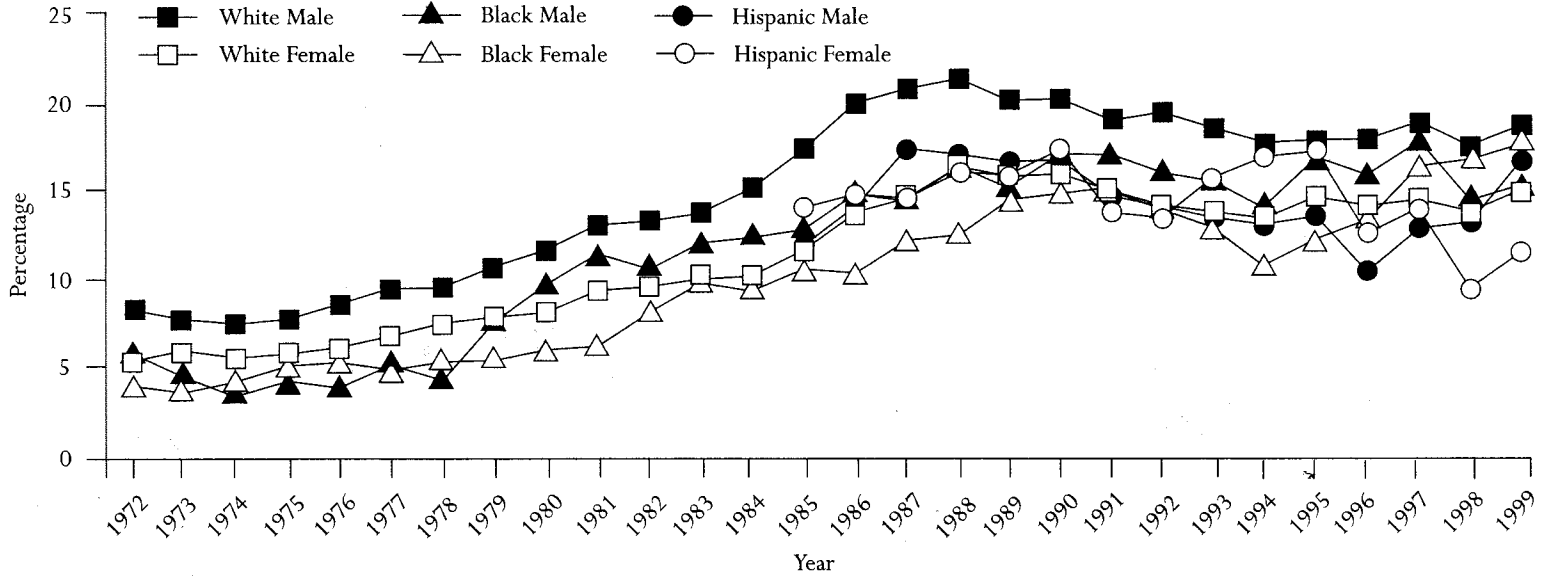
Extended Kindergarten Attendance Historically, there has been great variation in age at school entry in the United States.¹¹ This variation once had more to do with the labor demands of a farm economy and the availability of schooling to disadvantaged groups than with readiness for school. The variability declined as school enrollment completed its diffusion from middle childhood into younger and older ages (Duncan 1968; National Research Council 1989).

The age at entry into graded school has gradually crept upward since the early 1970s, reversing one of the major historic trends contributing to the growth of schooling in the United States. The Census Bureau's statistics on grade enrollment by age show that, from the early 1970s to the late 1980s, entry into first grade gradually came later in the development of many children. However, for the past decade there has been little change in age at school entry. Figure 7.1 shows the percentages of six-year-old children who had not yet entered the first grade as of October of the given year. Among six-year-old boys, only 8 percent had not yet entered the first grade in 1971,¹² but 22 percent were not yet in the first grade in 1987, and 20 percent were not yet in the first grade in 2000. Among six-year-old girls, only 4 percent had not yet entered the first grade in 1971, but 16 percent were not yet in the first grade in 1987 or in 2000. While boys are consistently more likely than girls to enter first grade after age six, there are only small differences between blacks and whites in age at entry into graded school, and these differences consistently favor black children. That is, six-year-old black children are slightly less likely than white children of the same age and sex to be enrolled below the first grade or not enrolled in school. Also, six-year-old Hispanic boys are consistently more likely than white boys to have entered first grade. However, six-year-old Hispanic girls are less likely than white girls to have entered first grade.

It is not clear why age at school entry has increased. One contributing factor has been the influence of state laws on minimum age at school entry. Another factor—suggested by the initially slow school entry of white boys—is that some parents “red shirt” their children at an early age in order to give them an advantage in athletic competition later on. Early school retention is a third potential explanation of the trend.

Over the past two decades attendance in kindergarten has been extended to two years for many children in American schools.¹³ There is no single name for this phenomenon. As Lorrie Shepard (1991) reports, the names for such extended kindergarten classrooms include “junior-first,” “prefirst,” “transition,” and “readiness room.” There are also no distinct categories for the first and second years of kindergarten in census enrollment data. Fragmentary reports suggest that, in some places, kindergarten retention may have been as high as 50 percent in the late 1980s (Shepard 1989; Shepard 1991). There are also reports of inappropriate use of cognitive tests in such decisions (Shepard 1991, 287; Shepard, Kagan, and Wurtz 1998). The degree to which early retention decisions originate with parents—

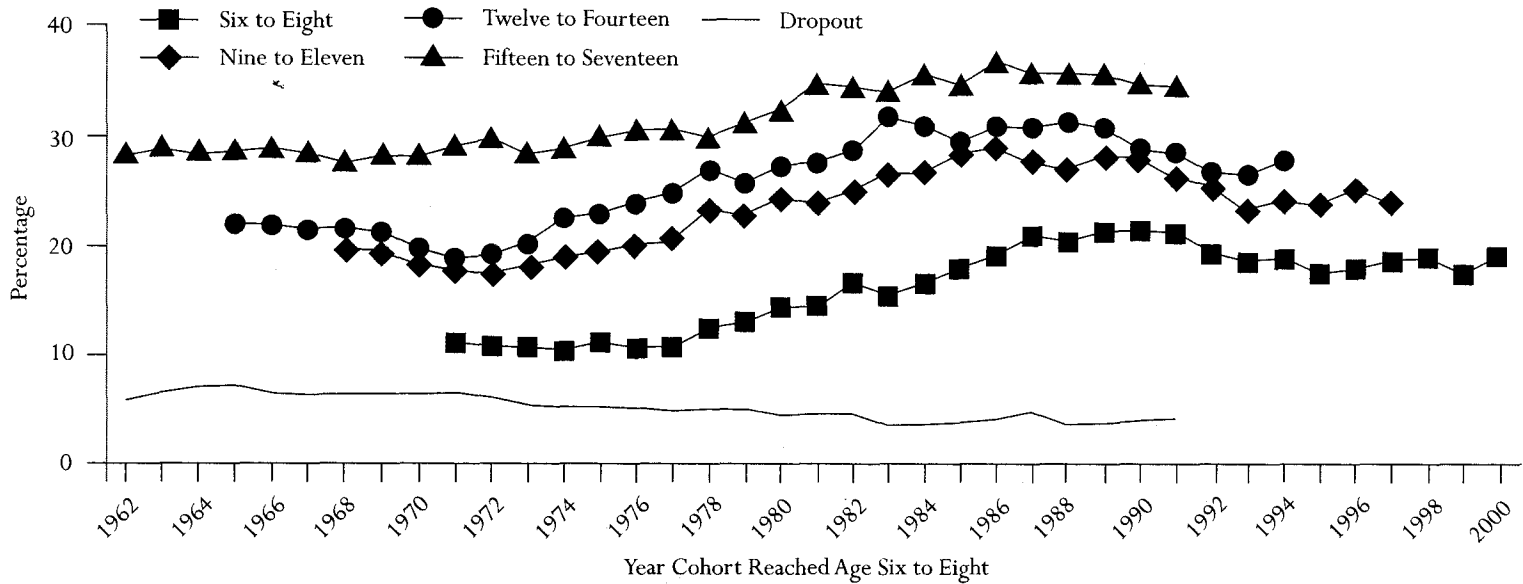
FIGURE 7.1 Six-Year-Old Children Who Have Not Entered First Grade, by Race-Ethnicity, 1972 to 1999



Source: U.S. Department of Commerce, U.S. Census Bureau, "School Enrollment: Social and Economic Characteristics of Students," *Current Population Reports*, P-20 series, nos. 241, 260, 272, 286, 303, 319, 333, 346, 360, 400, 408, 413, 426, 439, 443, 452, 460, 469, 474, 479, 487, 492, 500, 516, 521, and 533.

Note: Entries are three-year moving averages.

FIGURE 7.2 *Children Enrolled Below Modal Grade for Age, by Age Group and Year in Which Cohort Was Six to Eight Years Old*



Source: U.S. Department of Commerce, U.S. Census Bureau, table A-3, "The Population Six to Seventeen Years Old Enrolled Below Modal Grade," <http://www.census.gov/population/socdemo/school/tabA-3.pdf>.

for example, to increase their children's chances for success in athletics—rather than with teachers or other school personnel is not known. Moreover, there are no regular national estimates of the prevalence of kindergarten retention, and none of the available state data indicate exceptionally high kindergarten retention rates. From occasional national surveys, Nancy Karweit (1999) suggests that “by first grade between 7 and 11 percent of children have been retained.”

Excepting the ubiquitous tendency for girls to enter (and complete) primary and secondary school at earlier ages than boys, there is little sign of social differentiation in age at school entry. Instead, socially differentiated patterns of grade retention begin to develop after entry into graded school, and they persist through secondary school.

Retention in the Primary and Secondary Grades Age-grade retardation refers to enrollment below the modal grade level for a child's age. (No broader meaning is either intended or implied.) I have examined national rates of age-grade retardation by age, sex, and race-ethnicity for three-year age groups at ages six to seventeen from 1971 to 2000 and also parallel tabulations for young children by single years of age from 1971 to 2000. In each case, I have organized the data by birth cohort (year of birth) rather than by calendar year, so it is possible to see the evolution of age-grade retardation throughout the schooling of a birth cohort as well as changes in age-grade retardation rates from year to year.¹⁴

The recent history of age-grade retardation is summarized in figure 7.2. It shows age-grade retardation at ages six to eight, nine to eleven, twelve to fourteen, and fifteen to seventeen among children who reached ages six to eight between 1962 and 2000. The horizontal axis shows the year in which an age group reached ages six to eight, so vertical comparisons among the trend lines at a given year show how age-grade retardation cumulated as a birth cohort grew older.

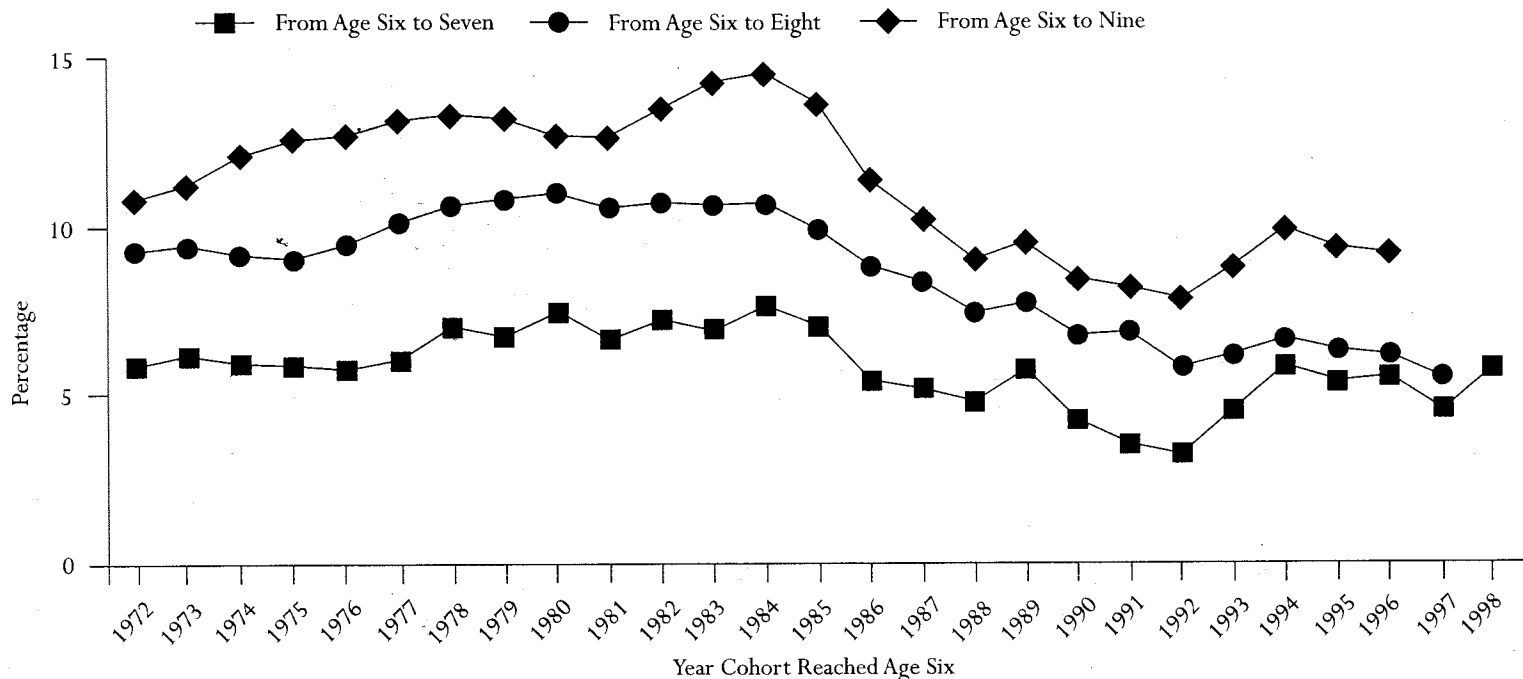
For example, consider children who were six to eight years old in 1991—the most recent cohort whose history can be traced all the way from ages six to eight up through age fifteen to seventeen. At ages six to eight, 21.2 percent were enrolled below the modal grade for their age. By 1994, when this cohort reached ages nine to eleven, age-grade retardation had grown to 26.2 percent, and it was 28.5 percent in 1997, when the cohort reached ages twelve to fourteen. By 2000, when the cohort had reached ages fifteen to seventeen, the percentage who were either below the modal grade level or had left school was 34.5 percent. Almost all of the growth in retardation after ages twelve to fourteen, however, was due to dropout (4.3 percent) rather than grade retention among the enrolled.

We could read the rate of enrollment below the modal grade at ages six to eight as a baseline measure, that is, as if it does not necessarily indicate that grade retention took place. Relative to that baseline, increases in enrollment below the modal grade at older ages clearly show the net effects of retention in grade. This reading of the data would suggest that, in most birth cohorts, retention occurs mainly between ages six to eight and ages nine to eleven or between ages twelve to fourteen and ages fifteen to seventeen.¹⁵ This way of looking at the data surely understates the prevalence of grade retention, for much of it occurs within ages six to eight and within ages fifteen to seventeen—that is, either early in elementary school or during the high school years.

The series for ages fifteen to seventeen includes early school dropout, which is also shown as a separate series along the bottom of figure 7.2. Dropout, rather than retention, evidently accounts for a substantial but declining component of the increase in age-grade retardation between ages twelve to fourteen and ages fifteen to seventeen.

The trend in age-grade retardation at ages six to eight, nine to eleven, twelve to

FIGURE 7.3 *Change in Age-Grade Retardation from Age Six to Age Seven, Eight, and Nine, by Year When Cohort Was Six Years Old*



Source: U.S. Department of Commerce, U.S. Census Bureau, "School Enrollment: Social and Economic Characteristics of Students," *Current Population Reports*, P-20 series, nos. 241, 260, 272, 286, 303, 319, 333, 346, 360, 400, 408, 413, 426, 439, 443, 452, 460, 469, 474, 479, 487, 492, 500, 516, 521, and 533.

Note: Entries are three-year moving averages.

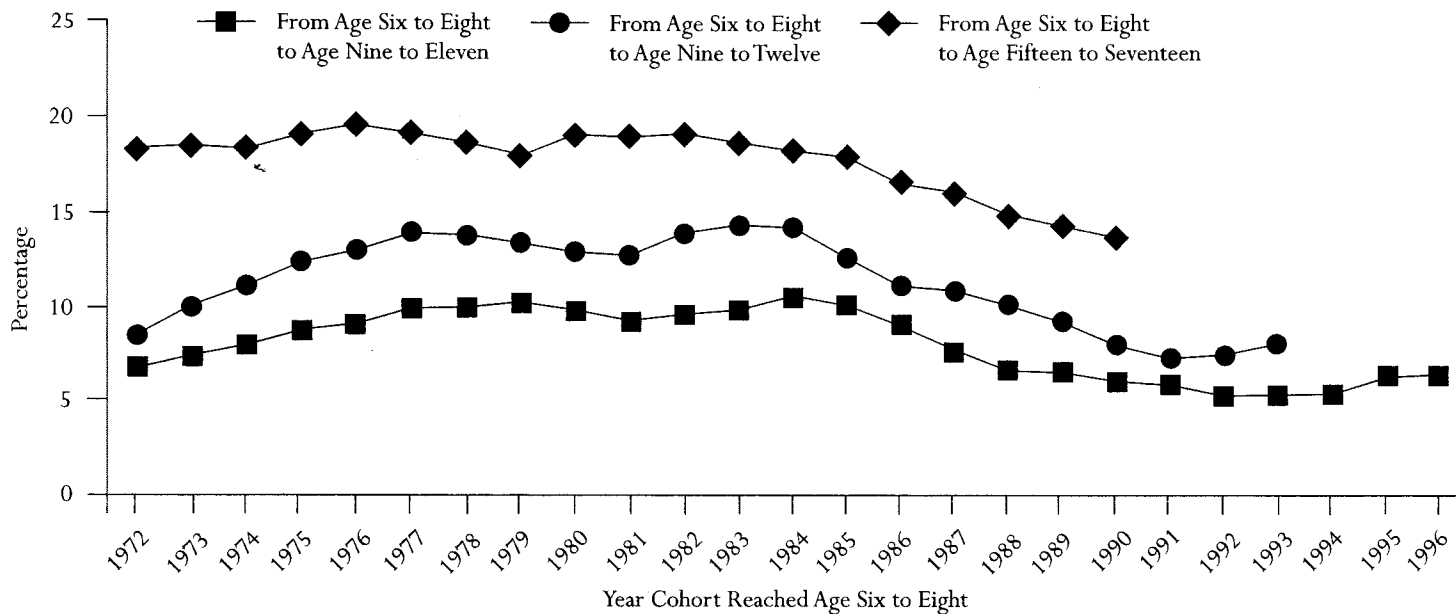
fourteen, and fifteen to seventeen can be read across figure 7.2 from left to right. Age-grade retardation increased in every age group from the cohorts of the early 1970s through those of the middle to late 1980s. Age-grade retardation increased at ages fifteen to seventeen after the mid-1970s despite the slow decline in the early school dropout component throughout the period. That is, grade retention increased while dropout decreased. Peak rates occurred earlier at older than at younger ages, suggesting that policy changes occurred in specific calendar years rather than consistently throughout the life of successive birth cohorts. Among cohorts entering school after 1970, the percentage enrolled below the modal grade level was never less than 10 percent at ages six to eight, and it exceeded 20 percent for cohorts of the late 1980s. The trend-lines suggest that age-grade retardation has declined slightly for cohorts entering school after the mid-1980s, but rates have not approached the much lower levels of the early 1970s.

Overall, a large share of each birth cohort now experiences grade retention during elementary school. Among children ages six to eight from 1982 to 1997, age-grade retardation had reached 24 to 29 percent by ages nine to eleven.

Retention After School Entry Enrollment below the first grade at age six is a convenient baseline against which to assess the effects of later grade retention. The comparisons of age-grade retardation at ages seven to nine with that at age six are shown in figure 7.3.¹⁶ There are two main patterns in the series. First, grade retention takes place through the elementary years at each successive age. Retention cumulates rapidly after age six. For example, among children who were six years old in 1991, enrollment below the modal grade increased by 3.4 percentage points between ages six and seven and by 4.7 more percentage points between ages seven and nine. Excepting the cohorts that entered school between 1988 and 1993, age-grade retention increased by 9 percent or more between ages six and nine, and it never increased by less than 7 percent between those two ages. Second, there appears to have been a decline in retention after the early 1980s and a possible reversal of that trend for cohorts entering school in the 1990s. That is, comparing figure 7.1 with figure 7.3, we can infer a shift in elementary school age-grade retardation downward in age from the transition between ages six and seven to somewhere between ages four and six—including the possible effects of legal changes in age at school entry.

How much grade retention is there after ages six to eight? And does the recent growth in grade retardation by ages six to eight account for its observed growth at older ages? Figure 7.4 shows changes in age-grade retardation between ages six to eight and each of the three older age groups.¹⁷ Age-grade retardation grew substantially after ages six to eight as a result of retention in grade. For example, among children who reached ages six to eight between 1972 and 1985, almost 20 percent more were below the modal grade for their age by the time they were fifteen to seventeen years old. Among children who reached ages six to eight between the mid-1970s and the mid-1980s, grade retardation grew by about ten percentage points by ages nine to eleven, and it grew by close to five percentage points more by ages twelve to fourteen. Relative to ages six to eight, age-grade retardation at ages nine to eleven and ages twelve to fourteen increased for cohorts who were six to eight years old in the early 1970s; it was stable from the mid-1970s to the mid-1980s, and it has declined since then. However, the gap between retention at ages fifteen to seventeen and that at ages six to eight has been relatively stable—close to twenty percentage points—possibly excepting a very recent downward turn. Thus, the rise in age at entry into first grade—which is partly due to kindergarten retention—accounts for much of the overall increase in age-grade retardation among teenagers.

FIGURE 7.4 *Changes in Age-Grade Retardation from Age Six to Eight to Age Nine to Seventeen, by Year When Cohort Was Six to Eight Years Old*



Source: U.S. Department of Commerce, U.S. Census Bureau, table A-3, "The Population Six to Seventeen Years Old Enrolled Below Modal Grade," <http://www.census.gov/population/socdemo/school/tabA-3.pdf>.

Note: Dropouts are included in the series at age fifteen to seventeen. Entries are three-year moving averages.

In summary, grade retention is pervasive in American schools. It is cautionary to think about the implications of "an end to social promotion" when ages at school entry are increasing and a large share of each new cohort of youth already experiences grade retention. It is especially important to consider the implications of an end to social promotion in light of the social differences in retention rates.

Social Differences in Retention While there are similarities in the age pattern of grade retardation among major population groups—among boys and girls and among majority and minority groups—there are also substantial differences in rates of grade retardation, many of which develop well after school entry. Figure 7.5 shows rates of age-grade retardation of boys and girls at ages six to eight and ages fifteen to seventeen. Overall, the gender differential gradually increases with age, from five percentage points at ages six to eight to ten percentage points at ages fifteen to seventeen. That is, boys are initially more likely than girls to be placed below the modal grade for their age, and they fall further behind girls as they pass through childhood and adolescence.

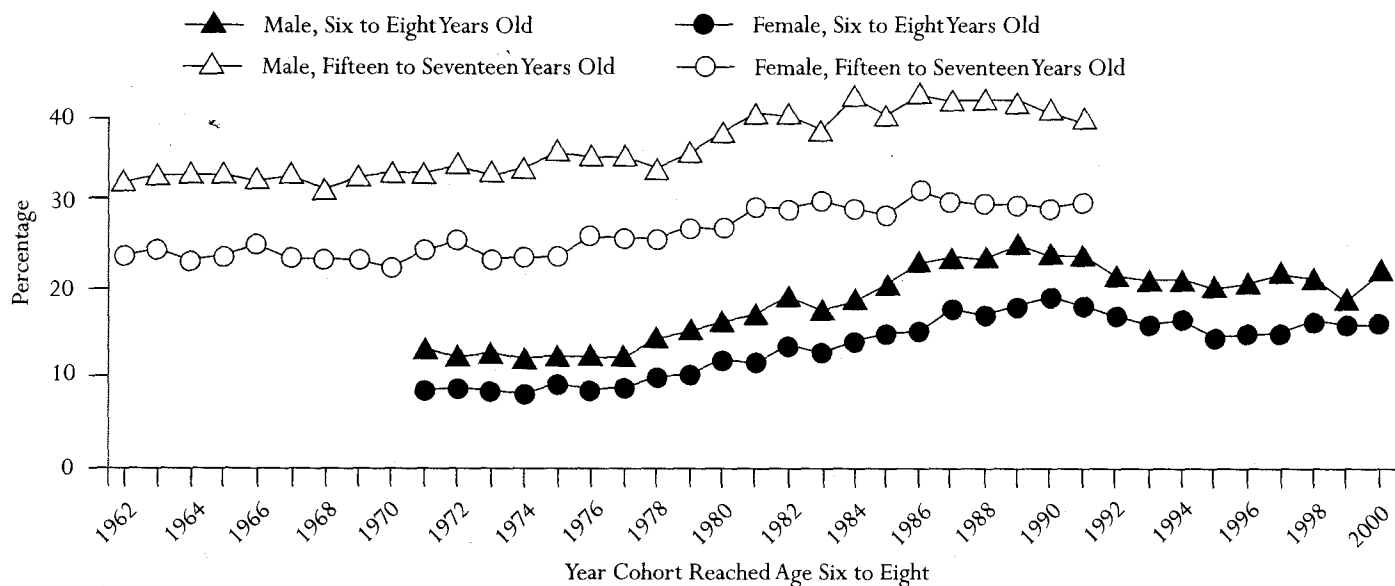
The differentiation of age-grade relationships by race and ethnicity is even more striking than that by gender. Figures 7.6 to 7.9 show trends in the development of age-grade retardation by race-ethnicity in each of the four age groups: six to eight years old, nine to eleven years old, twelve to fourteen years old, and fifteen to seventeen years old. Unlike the case of gender differentiation, at ages six to eight the rates of age-grade retardation are very similar among whites, blacks, and Hispanics. By ages nine to eleven, the percentages enrolled below modal grade levels have typically been five to ten percentage points higher among blacks or Hispanics than among whites, but the white and Hispanic rates have converged for cohorts entering school after 1987.

The differentials continue to grow with age, and at ages fifteen to seventeen, rates of grade retardation range from 40 to 50 percent among blacks and Hispanics, while they have gradually drifted up from 25 percent to 35 percent among whites. By this age, there is also a differential between Hispanics and blacks, favoring the latter; this appears to follow from high rates of early school dropout among Hispanics. Figure 7.10 shows the rates of school dropout among fifteen- to seventeen-year-old whites, blacks, and Hispanics. There is almost no difference in early school dropout between whites and blacks, but Hispanics are much more likely to leave school at an early age.¹⁸ Thus, early high school dropout contributes very little to the observed difference in age-grade retardation between blacks and whites, which is mainly due to retention in grade. Early dropout does account in part for the difference in age-grade retardation between Hispanics and whites or blacks.

In recent years, gender and race-ethnic differentials in age-grade retardation, even at young ages, are a consequence of school experience and not primarily of differentials in age at school entry. Social differentials in age-grade relationships are vague at school entry, but a hierarchy is clearly established by age nine, and it persists and grows through the end of secondary schooling. This growth can be explained only by grade retention. By age nine, there are sharp social differentials in age-grade retardation, favoring whites and girls relative to blacks or Hispanics and boys. By ages fifteen to seventeen, close to 50 percent of black males have fallen behind in school—thirty percentage points more than at ages six to eight—but age-grade retardation has never exceeded 30 percent among white girls of the same age. These rates and differentials in age-grade retardation are characteristic of a schooling regime in which social promotion is perceived to be the norm. Both the rates and differentials could become much larger as new policies of achievement testing and accountability are put in place.

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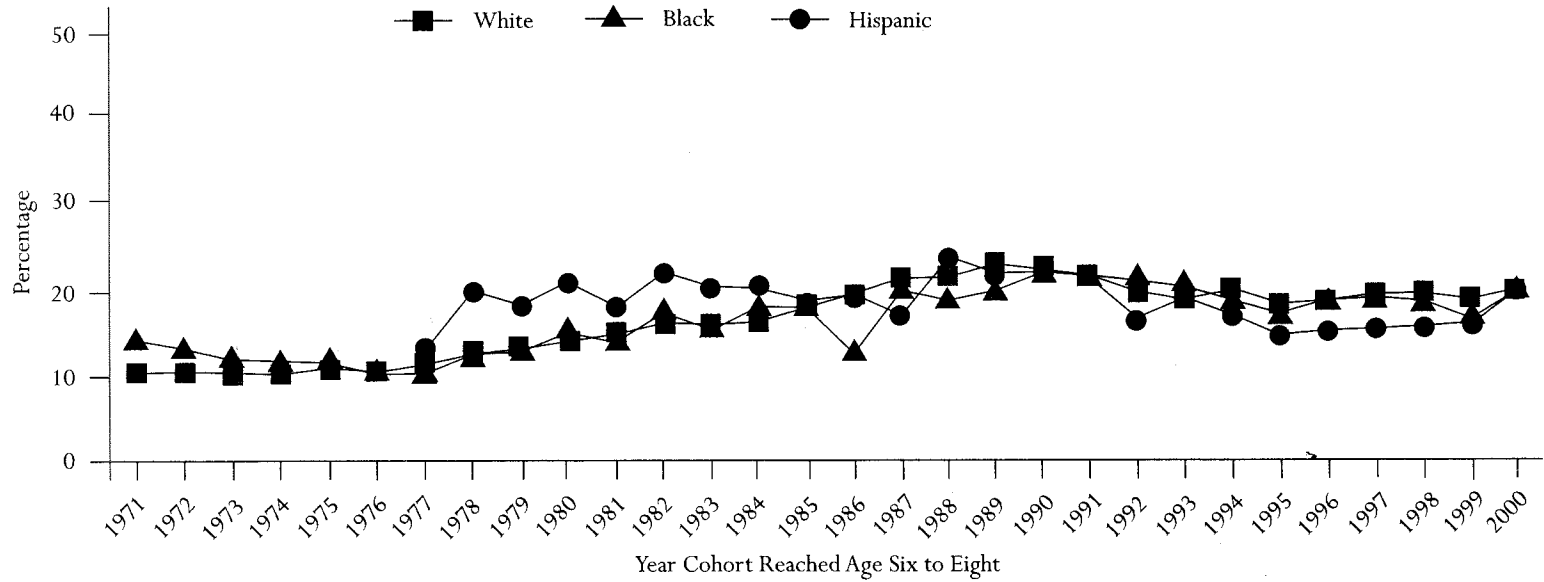
FIGURE 7.5 *Children Enrolled Below Modal Grade at Age Six to Eight and at Age Fifteen to Seventeen, by Sex and Year Cohort Reached Age Six to Eight*



Source: U.S. Department of Commerce, U.S. Census Bureau, table A-3, "The Population Six to Seventeen Years Old Enrolled Below Modal Grade," <http://www.census.gov/population/socdemo/school/tabA-3.pdf>.

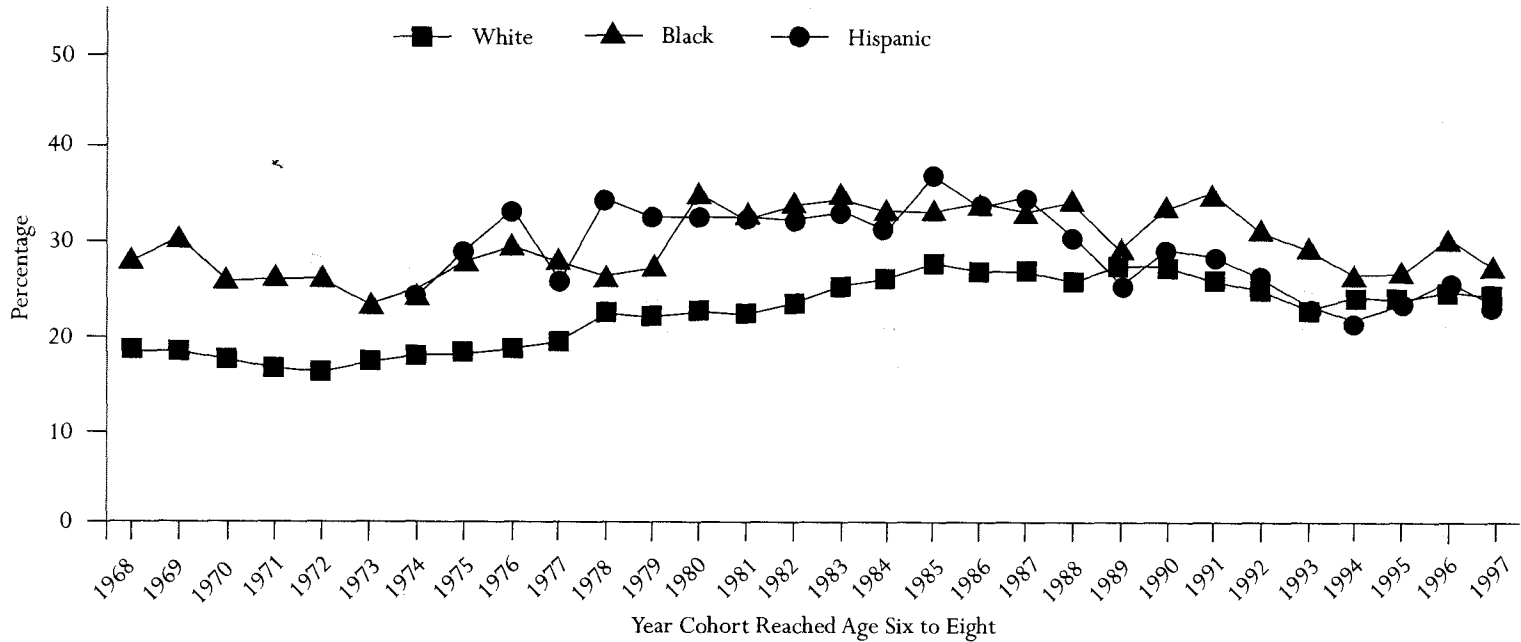
Note: Dropout is counted as age-grade retardation at age fifteen to seventeen.

FIGURE 7.6 *Children Enrolled Below Modal Grade at Age Six to Eight by Race-Ethnicity and Year*



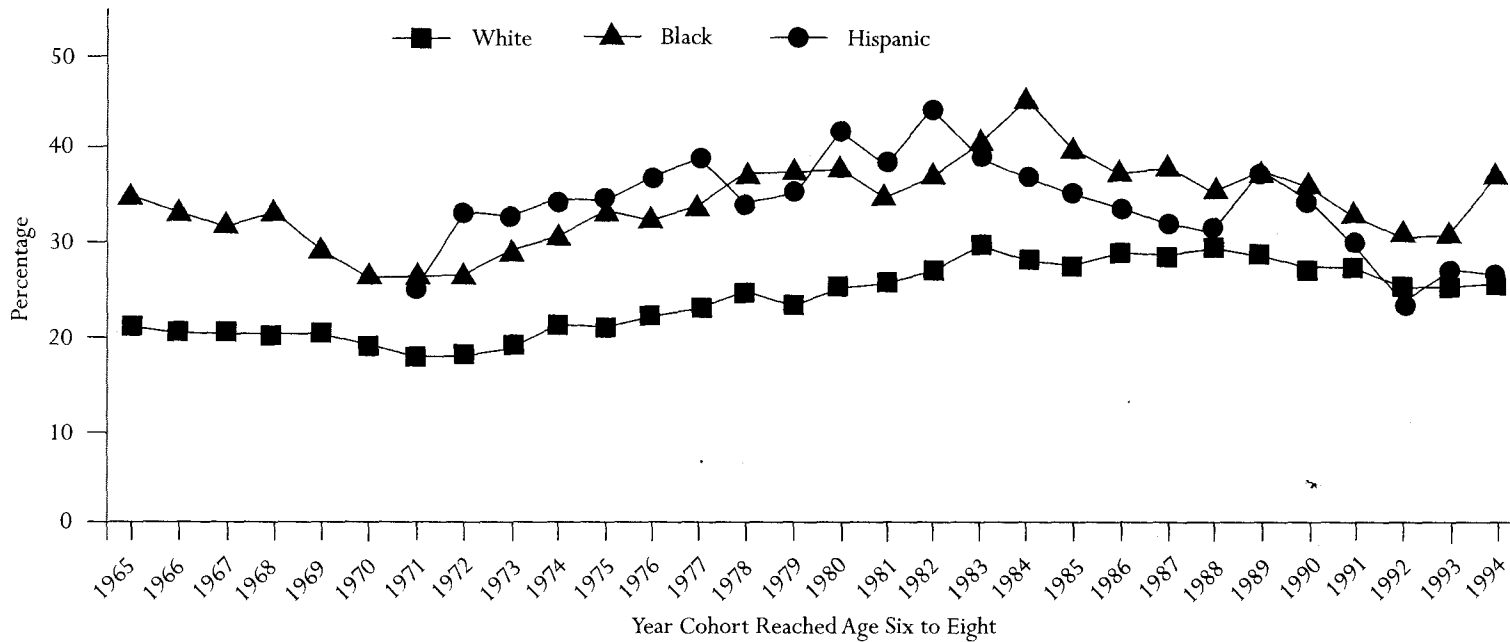
Source: U.S. Department of Commerce, U.S. Census Bureau, table A-3, "The Population Six to Seventeen Years Old Enrolled Below Modal Grade," <http://www.census.gov/population/socdemo/school/tabA-3.pdf>.

FIGURE 7.7 *Children Enrolled Below Modal Grade at Age Nine to Eleven, by Year Cohort Reached Age Six to Eight by Race-Ethnicity*



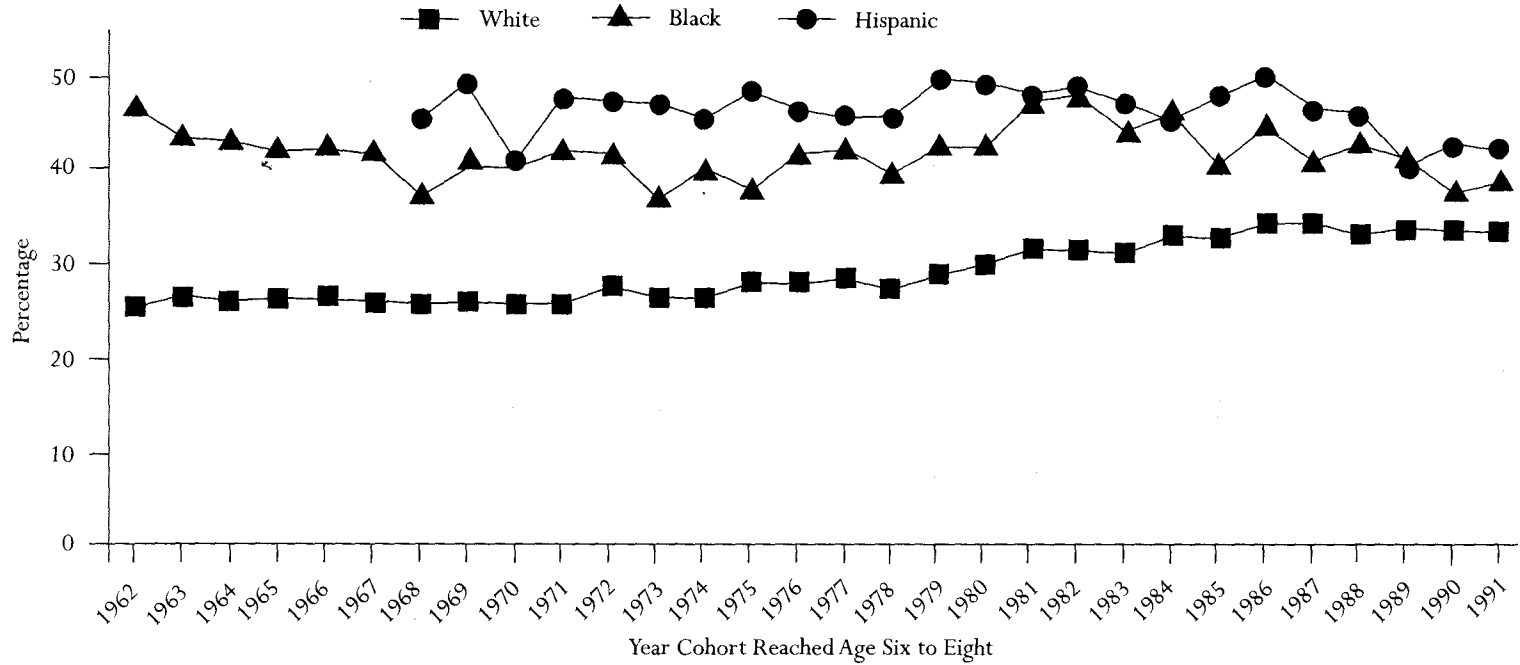
Source: U.S. Department of Commerce, U.S. Census Bureau, table A-3, "The Population Six to Seventeen Years Old Enrolled Below Modal Grade," <http://www.census.gov/population/socdemo/school/tabA-3.pdf>.

FIGURE 7.8 *Children Enrolled Below Modal Grade at Age Twelve to Fourteen, by Year Cohort Reached Age Six to Eight by Race-Ethnicity*



Source: U.S. Department of Commerce, U.S. Census Bureau, table A-3, "The Population Six to Seventeen Years Old Enrolled Below Modal Grade," <http://www.census.gov/population/socdemo/school/tabA-3.pdf>.

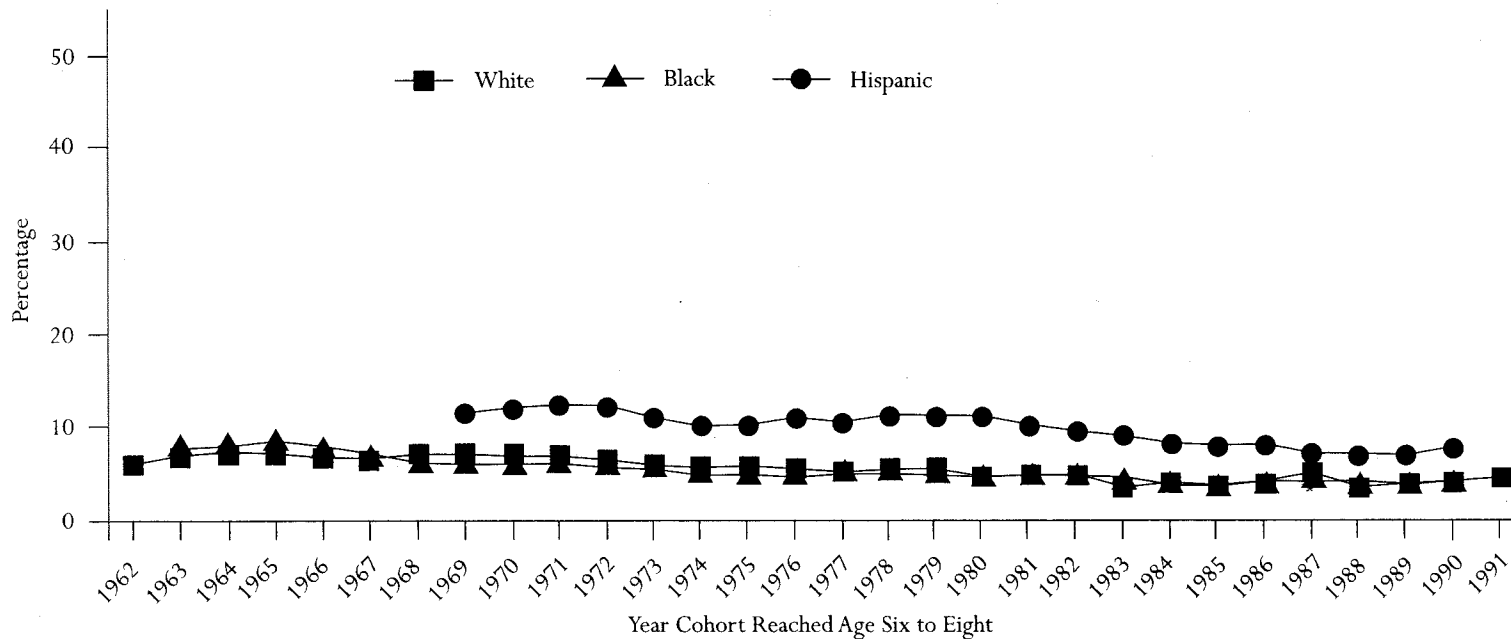
FIGURE 7.9 *Children Enrolled Below Modal Grade or Dropping Out by Age Fifteen to Seventeen, by Year Cohort Reached Age Six to Eight by Race-Ethnicity*



Source: U.S. Department of Commerce, U.S. Census Bureau, table A-3, "The Population Six to Seventeen Years Old Enrolled Below Modal Grade," <http://www.census.gov/population/socdemo/school/tabA-3.pdf>.

Note: Dropout is counted as age-grade retardation at age fifteen to seventeen.

FIGURE 7.10 *Children Dropping Out by Age Fifteen to Seventeen, by Year Cohort Reached Age Six to Eight by Race-Ethnicity*



Source: U.S. Department of Commerce, U.S. Census Bureau, table A-3, "The Population Six to Seventeen Years Old Enrolled Below Modal Grade," <http://www.census.gov/population/socdemo/school/tabA-3.pdf>.

Figures 7.11 and 7.12 show trends in age-grade retardation in three broad family income groups: the bottom fifth, the top fifth, and the middle 60 percent of the income distributions.¹⁹ Both at ages six to eight and at ages fifteen to seventeen, there have been large differences in grade retardation by family income, and these have been larger at older than at younger ages.²⁰ For example, from 1972 to 1974 through 1993 to 1995, at ages fifteen to seventeen, roughly 20 percent more youth from families in the bottom fifth of the income distribution fell behind than youth in the middle 60 percent. The differential between the top and bottom fifths of the family income distribution exceeded thirty-five percentage points over the same period. However, with a single recent exception, there has been little indication of increasing inequality in age-grade retardation by family income. On the contrary, at ages six to eight, the income differentials decreased steadily from 1987 to 1989 through 1996 to 1998, and at ages fifteen to seventeen, the differentials decreased after 1993 to 1995. One worrisome exception is the apparent reversal of trend at ages six to eight between 1996 to 1998 and 1999 to 2000.

Multivariate Analyses of Retention While the disproportionate rates of grade retention among minorities are both large and of long standing (U.S. Department of Commerce 1979; National Research Council 1999; Hauser 2001), relatively little research has focused on the role that socioeconomic and family differences between population groups play in accounting for those differences. At the national level, we can look back only to a few simple tabulations from the 1976 Survey of Income and Education (U.S. Department of Commerce 1979) and to an exploratory—but exemplary—analysis of family background and age-grade retardation in the October Current Population Survey of 1979 (Bianchi 1984). Both of these analyses suggest that social and economic background, rather than minority status *per se*, accounts for a large share of group differences in retention.

My colleagues and I (Hauser, Pager, and Simmons 2000) have analyzed differentials in age-grade retardation by social and family background among six-, nine-, twelve-, fifteen-, and seventeen-year-olds, using data from the October Current Population Survey from 1972 through 1998. These ages span the period between normative entry into graded school and the later years of high school, but they do not extend to the ages at which a substantial minority of youth no longer live in parental or quasi-parental households. At these ages, the modal October grade levels are first, fourth, seventh, tenth, and twelfth. By looking at several ages across almost three decades, we observed trends in typical developmental patterns of retention and of differentials in retention.

From 1972 to 1998, the October CPS data files include between 57,500 and 63,500 cases at each age. The file attaches characteristics of school-age youth and of their households to enrollment data (Hauser, Jordan, and Dixon 1993; Hauser and Hauser 1993). The individual data include race-ethnicity, enrollment status, grade level, region of residence, and metropolitan location. The jinked characteristics of the household and householders include family income, the number of children in the household, whether it is a single-parent household, the education of the household head and the spouse of the head, whether the head or spouse has no occupation, the occupation of the head and of the spouse, and housing tenure. However, the CPS data lack any measure of academic achievement.

In Hauser, Pager, and Simmons (2000), we carried out logistic regression analyses of enrollment below modal grade level versus enrollment at or above modal grade level at each age. Our estimates for six-year-olds are shown in table 7.1. Columns 1, 2, and 3 show the effect of each variable alone, with no other variables controlled, and columns 4, 5, and 6 show effects when all of the variables have been entered in the equation. Estimated effects

of race-ethnicity show lower odds of age-grade retardation among African Americans and "others" than among non-Hispanic whites or Hispanics. One strong and expected effect is that of gender: the odds of boys' enrollment below the first grade, other things being equal, are 40 percent higher than those of girls. Also, the odds of age-grade retardation are lower in major central cities than in other areas, and lower in the East than in other regions. Otherwise, the effects of social and economic background characteristics are modest, reflecting the lack of social and economic differentiation in age at school entry.

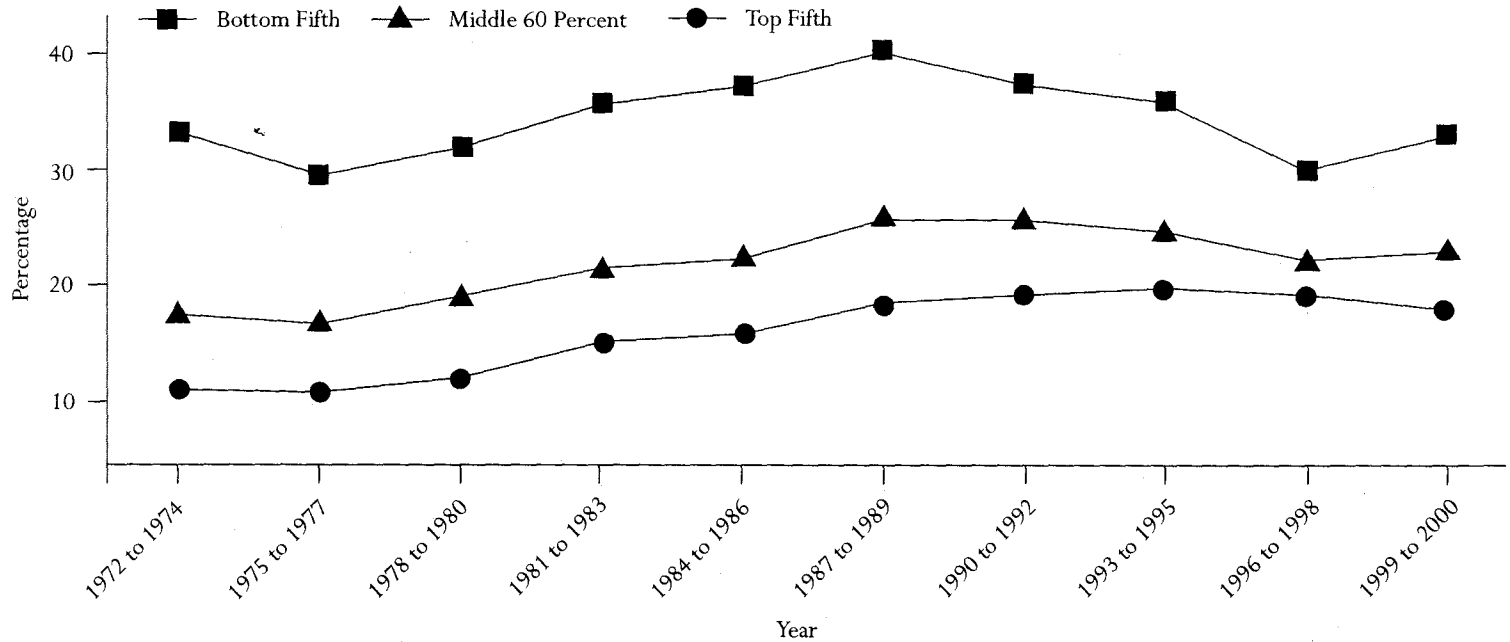
At each successive age, social and geographic differentials become more pronounced: gross race-ethnic differentials become larger; the effects of socioeconomic background variables increase; central cities become notably more likely to have overage students than suburbs; and regional differences between the South and all other regions become sharper. For example, table 7.2 shows estimates from Hauser, Pager, and Simmons (2000) for seventeen-year-old youth. Students in the South are significantly more likely to be below modal grade for age. The regional differences hold for cities as well as for the whole region: southern cities have the highest rates of age-grade retardation, while northern and western cities have the lowest rates. Also, there is increasing differentiation between central cities and their suburbs with increases in age. By age seventeen, rates of age-grade retardation are roughly one-third higher in the largest central cities than in their suburbs, after controlling social background characteristics.

Perhaps most striking in our findings were the net effects of social background relative to the race-ethnic differentials. The odds of age-grade retardation (or dropout) at age seventeen were about two and a half times larger among African Americans and Hispanics than among white non-Hispanics. However, once the full set of social background and geographic characteristics were controlled, the major differences among the race-ethnic groups disappeared. The most important effects were the structural and socioeconomic characteristics of families, not the geographic characteristics (regional, central city, or suburban location). For example, a one-unit change in the log of family income reduced the odds of age-grade retardation by 20 percent, and homeownership reduced the odds by more than 35 percent. Actually, relative to other age groups, the seventeen-year-olds showed exceptionally large net effects of race-ethnicity. Although most of the very large race-ethnic differential at age seventeen is explained by the other variables in the model, there remain modestly larger odds of age-grade retardation among minorities. At other ages, although the raw odds of falling behind were about twice as great in minority groups as among whites, the race-ethnicity differentials were negligible after social background and geographic location were controlled. These findings also held in separate analyses of data from the 1970s, the 1980s, and the 1990s. Thus, over the past three decades there has been little evidence of direct race-ethnic discrimination in progress through the elementary and secondary grades.

However, these findings do not clearly demonstrate that there is no discrimination against minorities in progression through school. Given the large and ubiquitous race-ethnic differentials in achievement test scores, we should expect that minority students will have substantially *lower* rates of age-grade retardation than whites, if academic achievement as well as social and economic background variables are controlled. Thus, the absence of net differences in age-grade retardation, when social background but not academic achievement is controlled, suggests that minorities are subject to lower academic standards than whites. Some analysts suggest that the appearance of parity in age-grade relationships indicates a different form of discrimination, the absence of high academic standards. A corollary of these observations is that the recent movement toward high-stakes testing for promotion could magnify race-ethnic differentials in retention.

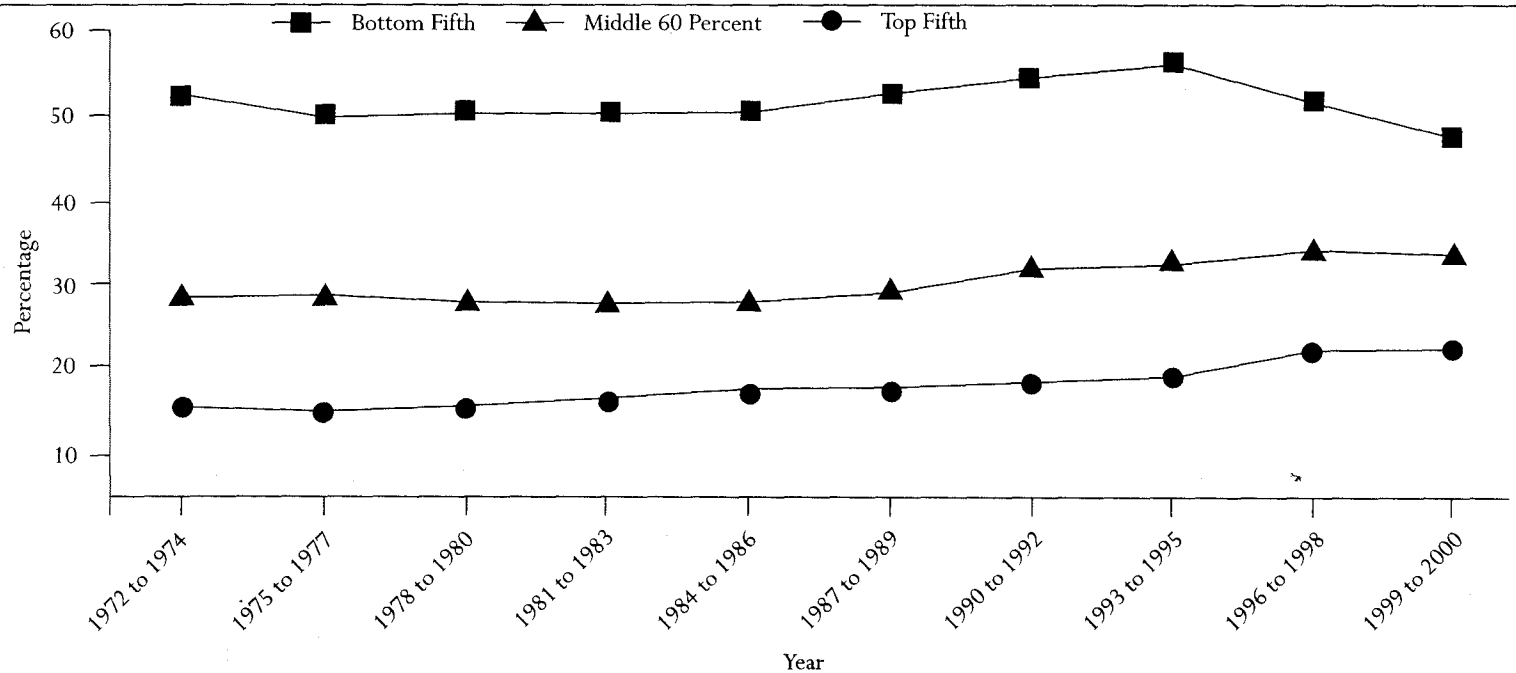
(Text continues on p. 296.)

FIGURE 7.11 *Children Age Six to Eight Who Were Enrolled Below the Modal Grade Level or Not Enrolled in School, by Family Income Group and Survey Year*



Source: U.S. Department of Commerce, U.S. Census Bureau, October Current Population Survey, uniform files, 1972 to 2000.

FIGURE 7.12 *Children Age Fifteen to Seventeen Who Were Enrolled Below the Modal Grade Level or Had Dropped Out of School, by Family Income Group and Survey Year*



Source: U.S. Department of Commerce, U.S. Census Bureau, October Current Population Survey, uniform files, 1972 to 2000.

TABLE 7.1 *Effects of Geographic Location, Social Background, and Year on Age-Grade Retardation Among Six-Year-Olds, 1972 to 1998*

	Gross Effect			Net Effect		
	Coefficient	Standard Error	EXP (Coefficient)	Coefficient	Standard Error	EXP (Coefficient)
Race-ethnicity						
White	—	—	1.000	—	—	1.000
African American	-0.375	0.041	0.687	-0.313	0.048	0.732
Hispanic	0.026	0.044	1.026	0.004	0.052	1.004
Other	-0.209	0.068	0.811	-0.382	0.071	0.682
Gender						
Female	—	—	1.000	—	—	1.000
Male	0.346	0.026	1.414	0.361	0.026	1.435
Metropolitan status						
Major central city	—	—	1.000	—	—	1.000
Major suburb	0.295	0.064	1.344	0.272	0.068	1.313
Smaller central city	0.438	0.062	1.549	0.465	0.064	1.592
Smaller suburb	0.439	0.059	1.551	0.447	0.063	1.564
Nonmetropolitan	0.710	0.056	2.035	0.678	0.061	1.971
Not identifiable	0.806	0.059	2.238	0.685	0.064	1.984
Region						
East	—	—	1.000	—	—	1.000
Midwest	0.684	0.038	1.983	0.688	0.040	1.989
South	0.226	0.040	1.254	0.171	0.042	1.187
West	0.345	0.041	1.411	0.248	0.043	1.281
Family background						
Log (family income)	-0.108	0.014	0.897	-0.086	0.020	0.918
Homeownership	-0.041	0.026	0.960	-0.065	0.032	0.937
Head's K-12 education	-0.003	0.007	0.997	-0.022	0.008	0.979
Head's postsecondary education	-0.002	0.007	0.998	-0.003	0.010	0.997
Spouse's K-12 education	-0.013	0.008	0.987	-0.015	0.010	0.985
Spouse's postsecondary education	0.025	0.008	1.025	0.029	0.011	1.030
Head's occupational status	-0.009	0.007	0.991	0.007	0.009	1.007
Spouse's occupational status	0.000	0.010	1.000	-0.023	0.012	0.977
Non-intact family	-0.012	0.030	0.988	-0.105	0.043	0.900
Total number of children in household	0.017	0.009	1.018	0.048	0.010	1.049
Constant	—	—	—	-2.699	0.246	0.067

Source: Author's compilation.

Note: Analyses also controlled for year and for missing data on some household variables. N = 60,506.

TABLE 7.2 *Effects of Geographic Location, Social Background, and Year on Age-Grade Retardation Among Seventeen-Year-Olds, 1972 to 1998*

	Gross Effect			Net Effect		
	Coefficient	Standard Error	EXP (Coefficient)	Coefficient	Standard Error	EXP (Coefficient)
<i>Race-ethnicity</i>						
White	—	—	1.000	—	—	1.000
African American	0.868	0.026	2.381	0.098	0.032	1.103
Hispanic	0.980	0.034	2.663	0.106	0.042	1.112
Other	0.511	0.049	1.668	0.124	0.055	1.132
<i>Gender</i>						
Female	—	—	—	—	—	1.000
Male	0.537	0.019	1.711	0.611	0.020	1.841
<i>Metropolitan status</i>						
Major central city	—	—	1.000	—	—	1.000
Major suburb	-0.886	0.040	0.412	-0.315	0.044	0.730
Smaller central city	-0.283	0.038	0.753	-0.064	0.042	0.938
Smaller suburb	-0.625	0.035	0.535	-0.136	0.041	0.873
Nonmetropolitan	-0.444	0.033	0.641	-0.195	0.040	0.823
Not identifiable	-0.556	0.037	0.574	-0.123	0.044	0.884
<i>Region</i>						
East	—	—	1.000	—	—	1.000
Midwest	-0.010	0.027	0.990	0.095	0.029	1.100
South	0.351	0.026	1.420	0.224	0.029	1.251
West	0.019	0.029	1.019	-0.027	0.032	0.973
<i>Family background</i>						
Log (family income)	-0.657	0.012	0.518	-0.234	0.016	0.791
Homeownership	-0.952	0.021	0.386	-0.458	0.025	0.633
Head's K-12 education	-0.150	0.004	0.861	-0.073	0.005	0.929
Head's postsecondary education	-0.149	0.006	0.862	-0.051	0.008	0.950
Spouse's K-12 education	-0.205	0.006	0.815	-0.086	0.007	0.917
Spouse's postsecondary education	-0.122	0.008	0.885	-0.013	0.010	0.987
Head's occupational status	-0.202	0.005	0.817	-0.054	0.007	0.947
Spouse's occupational status	-0.203	0.008	0.817	-0.056	0.010	0.945
Non-intact family	0.632	0.021	1.882	0.238	0.032	1.269
Total number of children in household	0.150	0.006	1.162	0.106	0.007	1.112
Constant	—	—	—	3.087	0.182	21.902

Source: Author's compilation.

Note: Analyses also controlled for year and for missing data on some household variables. N = 57,564.

If the large, observed race-ethnic differentials in age-grade retardation over the past three decades can largely be explained by group differences in family structure and social background, it follows that the effects of the latter variables are also large and persistent. Economic and social analysts tend to identify income as the key policy variable in child outcomes, but the estimates in table 7.2 show that each of a larger set of background characteristics has important effects on age-grade retardation. These include parental education and occupation, family structure, number of children in the household, and housing tenure, as well as family income. From existing research, it is not clear whether this array of background characteristics actually affects retention directly or whether its influence is largely or entirely mediated by academic performance. It should be possible to address this question, using data from the National Longitudinal Survey of 1988, by observing grade retention *after* the initial survey and test administration at the eighth-grade level.

Effects of Grade Retention

Retention in grade is not a negative outcome if it benefits the student. Are there positive consequences of being held back in school? Do students do better after repeating a grade, or would they have fared just as well or better if promoted with their peers? Research data indicate that simply repeating a grade does not generally improve achievement (Hauser 2001; Holmes 1989; House 1989; Jimerson 2001; McCoy and Reynolds 1999; Reynolds 1992). Furthermore, there is overwhelming evidence that retention increases school drop-out (Gampert and Opperman 1988; Grissom and Shepard 1989; Anderson 1994; Darling-Hammond and Falk 1995; Luppescu et al. 1995; Reardon 1996; Hauser, Simmons, and Pager 2000; Alexander, Entwisle, and Kabbani 2001, 767, 775). Indeed, the latter findings might be traced back to Ayres's (1909, 139–40) seminal observations about the link between promotion, age, and school-leaving. Some recent studies have reported favorable effects of retention on academic achievement, but without exception, these have all been subject to methodological criticism because of poor research design or questionable interpretations of data (Alexander, Entwisle, and Dauber 1994; Shepard, Smith, and Marion 1996; Karweit 1999; Dworkin 1999; Lorence et al. 2002; Shepard 2002; Roderick et al. 1999, 12–13; Moore 1999, 3; Roderick et al. 2000). I have reviewed several of these studies elsewhere (Hauser 2001).

It would perhaps be too much to say that grade retention cannot possibly succeed in raising academic performance more than the obvious alternative—promotion with remediation—but surely there is no compelling evidence that it increases academic achievement on a large scale or in the long term. To be sure, the available evidence is almost all based on typical educational practice, and we might believe that new practices would yield more favorable outcomes. However, if there are effective new practices, why not use valid assessments to identify students with learning difficulties and intervene before retention is the only alternative?

One of the greatest limitations of retention research is that, with the exception of three very early studies, there are no true field experiments. Many educational researchers dismiss this option because, they believe, it would be unethical. But if we truly do not know whether retention helps or hurts low-performing students, why would it be unethical to assign volunteers among low-performing students to either retention or promotion? Would this be any less ethical, say, than creating the variations in class size that have led to new understanding of the value of very small class sizes in the primary grades (Mosteller, Light, and Sachs 1996)? If there is truly continuing disagreement about the observational evidence

on retention and academic achievement, then a large-scale field experiment is a logical choice (Burtless 2002; Krueger 1999). Surely, such an experiment would be preferable to massive interference in the lives of America's most vulnerable children.

HIGH SCHOOL DROPOUT AND HIGH SCHOOL COMPLETION

There is no doubt that failure to complete high school limits social and economic life chances. Noncompleters have poor chances of employment, and those chances grew worse relative to those of high school graduates from the mid-1970s until the economic boom of the late 1990s. At ages twenty-five to thirty-four, the earnings of noncompleters are typically 20 percent less than those of graduates among men and 30 percent less among women. Electoral participation by high school dropouts is less than among high school graduates, and the gap has widened since the mid-1960s (National Center for Education Statistics 1994, 100–1). Illustrative differentials between dropouts and graduates could be elaborated endlessly. Failure to obtain at least a high school diploma looks more and more like the contemporary equivalent of functional illiteracy. High school dropout indicates a failure to pass minimum thresholds of economic, social, or political motivation, access, and competence.

Whether or not a person has completed a high school education would appear to be a simple matter of fact, yet there are diverse indicators of high school dropout and completion and diverse opinions about trends and differentials in them. In this section, I review evidence related to trends and to social and economic differentials in high school dropout and completion.²¹ I then connect the two major sections of this chapter by turning to evidence about the relationship between grade retention and high school dropout.

Among the highly publicized “National Educational Goals” (U.S. Department of Education 1990), 90 percent high school completion was cited as one of six primary goals.²² Since the mid-1980s, there has been a steady stream of new reports about the familial and socioeconomic origins of high school dropout (McLanahan 1985; Ekstrom et al. 1986; Krein and Beller 1988; Astone and McLanahan 1991; Haveman, Wolfe, and Spaulding 1991; Sandefur, McLanahan, and Wojtkiewicz 1992; Rumberger and Larson 1998; Hauser, Simmons, and Pager 2000), and the National Center for Education Statistics has produced a regular series of annual reports on trends and differentials in high school dropout (Frase 1989; Kaufman and Frase 1990; Kaufman, McMillen, and Whitener 1991; Kaufman et al. 1992; McMillen et al. 1993; McMillen, Kaufman, and Whitener 1994; McMillen and Kaufman 1996, 1997; McMillen 1997; Kaufman, Klein, and Frase 1999; Kaufman, Kwon, et al. 1999, 2001; Kaufman, Alt, and Chapman 2001). Thus, the association of high school dropout with educational and economic deprivation, minority status, and family disruption is well documented, as is the global trend in high school dropout, which has generally—but not always—declined since the 1970s.

The possible consequences for high school dropout of higher educational standards—especially test-based promotion and graduation—have stimulated new interest in dropout. Many believe that higher standards—or the expectation of eventual failure—will accelerate decisions to leave school on the part of marginal students (Lillard and DeCicca 2001). Some argue that high standards create pressure on school administrators, as well as on students, to leave school early if they have poor chances of graduation (Haney 2000). Others declare that lower rates of high school completion are acceptable if that is the price of higher demonstrated competence among those who persist to graduation (Hayward 2000). However, there is as yet little evidence about the effects of higher standards on school dropout, on

eventual high school completion, or, for that matter, on the academic achievements of high school graduates. That is, we are still poorly equipped to assess the costs and benefits of the trade-offs between the quality and quantity of high school graduates that may be entailed in standards-driven educational reforms.

It is not clear how long we may have to wait to observe the effects of educational policy changes on dropout rates, or whether the effects of visible policy changes may be swamped by other changes—for example, changes in overall economic activity (Duncan 1967). To provide an appropriate baseline to monitor future changes, I outline the recent social and historic context of high school dropout: How much high school dropout is there? Who drops out of high school? What are the major social and economic characteristics affecting high school dropout? What do we know about the connection between age-grade retention and high school dropout?

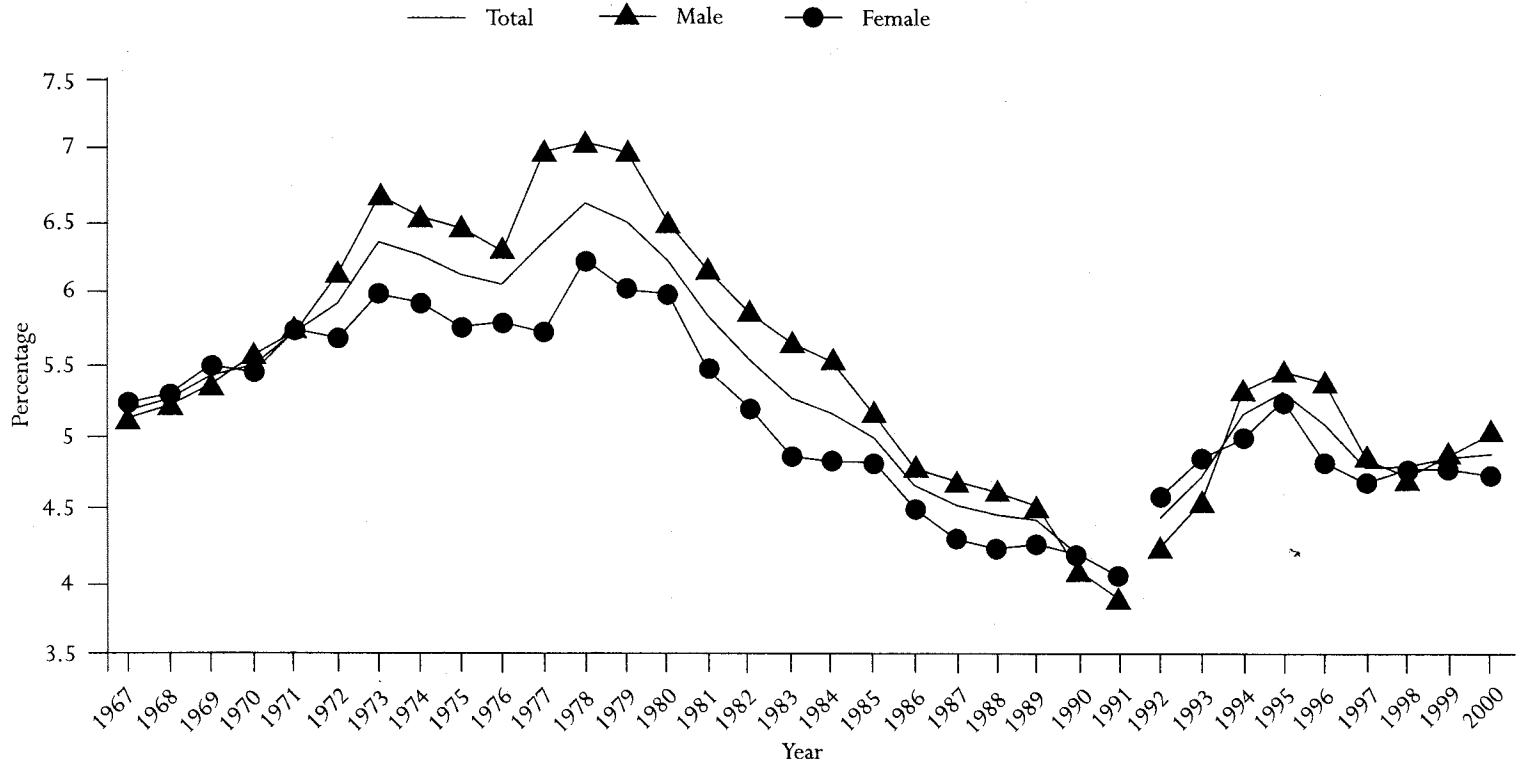
Measuring High School Dropout and Completion

School-leaving is a process that takes place over time, and it is not an irreversible process. Many students leave and return to high school (Anderson 1994). Thus, the fact that someone of high school age has not completed high school and is not currently enrolled does not imply that he or she will not eventually return to school and graduate. The problem of measuring dropout is compounded—for both statistical and practical purposes—by the fact that many youth gain high school equivalency credentials, typically by passing the General Educational Development (GED) examination, and often without enrolling in a regular school. Since 1990 the U.S. Census Bureau has confounded high school diplomas with completion of the GED by combining those two forms of certification in its definition of high school graduation, while adding a category of persons who completed twelve years of schooling but do not hold a high school diploma. Immigration creates additional problems in the measurement of dropout and high school completion. Especially in populations of Hispanic or Asian origin, many persons of school age, as well as older persons, may have had little exposure to American schools. In these populations, noncompletion of high school is not a valid indicator of high school dropout *per se*. For these reasons, among others, there is no one preferred measure of high school dropout or completion; the progress of populations through high school must be assessed with multiple measures.²³

Figure 7.13 shows time series, by gender, of the annual high school dropout rate used in periodic reports of the National Center for Education Statistics (Kaufman, Alt, and Chapman 2001). The rate rose from just over 5 percent to over 6 percent between 1967 and 1974, after which it declined regularly to about 4 percent in 1991. This is a very large decline, implying a cumulative reduction in dropout across grades ten to twelve—assuming no one returns to school—from almost 18 percent to less than 12 percent. For reasons explained later, there is a break in the series between 1991 and 1992, but the data suggest that dropout increased briefly in the early 1990s and then leveled off. Men were more likely to drop out than women between the early 1970s and the late 1980s, but before and since that period there has been little difference in high school dropout rates between women and men.

Annual dropout rates can be ascertained each year from the October Current Population Survey (Kominski 1990; Kominski and Adams 1993). Among rates that are available annually and for major population subgroups, this measure comes closest to recognizing that high school completion is a process that may involve repeated moves out of and back into school. Another important advantage of the annual dropout rates is that they condition on

FIGURE 7.13 Annual (Event) Dropout Rate by Gender, 1967 to 2000



Source: U.S. Department of Commerce, U.S. Census Bureau, October Current Population Survey, as reported by National Center for Education Statistics (2002 table C-3).

Note: Entries are two-year averages at end points and three-year averages elsewhere.

prior school enrollment. Thus, unlike “status” measures of dropout, they are not directly affected by the presence of immigrants who have had no exposure to schooling in the United States.

At the same time, the definition of the annual dropout rate is less than ideal because it combines persons who do not continue from one grade to the next in the survey year with persons who drop out from the next higher grade level during the academic year preceding the survey, as if they were in the same cohort. It also fails to identify return enrollees among each year’s students at each grade level. Despite these problems, the concept is useful, perhaps more so than definitions based on grade completion and enrollment by a specific age, which fail to take account of variation in age-grade progression.²⁴

Perhaps to increase reliability as well as to limit the number of data series that need to be displayed, annual dropout rates are usually combined across grades ten to twelve. This also partly overcomes the conceptual problem in cohort coverage. However, the aggregation across grade levels also exacerbates a serious problem of temporal comparability in the series. Because the construction of annual dropout rates based on the October CPS has, since 1992, rested on the official distinction between “12th grade no diploma” and “high school graduate (or equivalent),” there has been a substantial upward shift in the annual rate of high school dropout in the twelfth grade (McMillen, Kaufman, and Whitener 1994, 13).²⁵ We may accept or reject the new census definition of high school completion, but there would appear to be a conceptual inconsistency between the definitions of grade completion at the tenth- and eleventh-grade levels, which remain purely nominal, with the definition of grade completion at the twelfth-grade level, which now excludes persons who did not earn a high school diploma or equivalent.²⁶

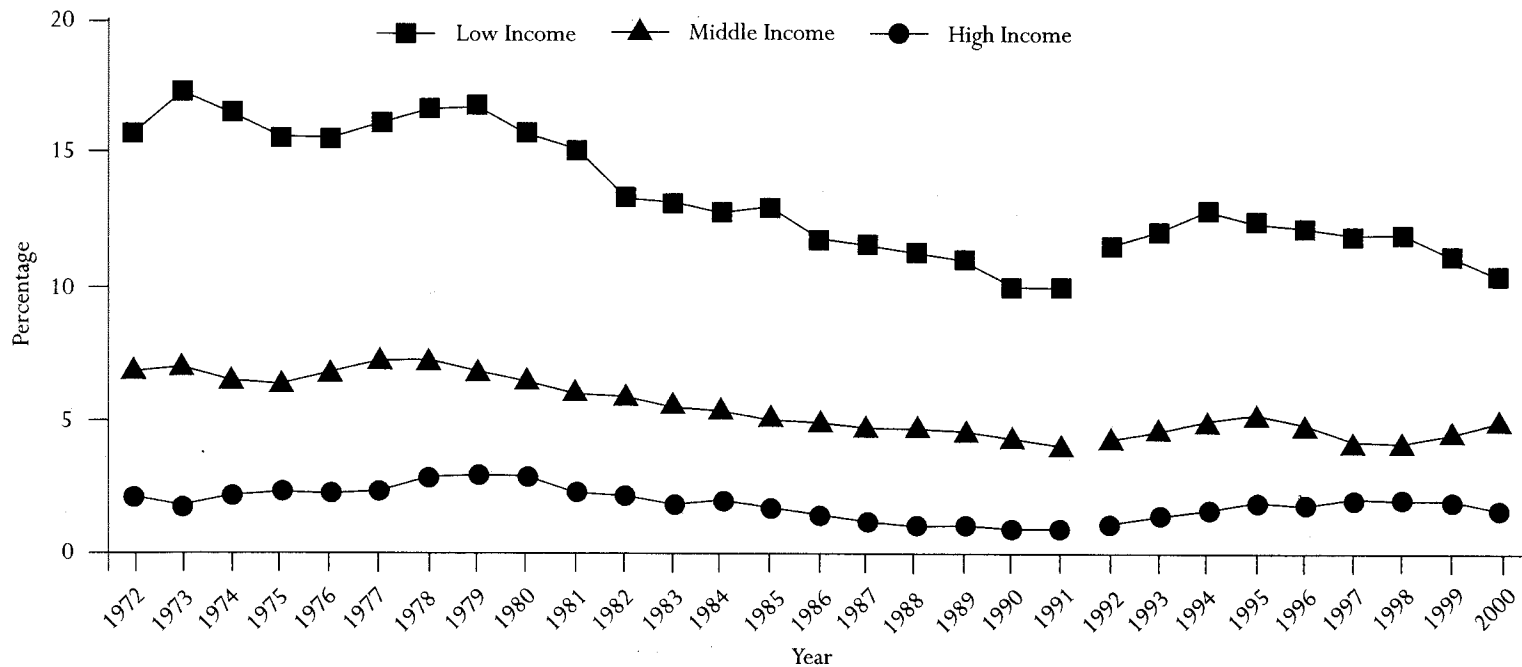
Trends and Differentials in High School Dropout

Figure 7.14 shows the trend in annual dropout rates for three family income groups: the bottom fifth, the middle 60 percent, and the top fifth of the distribution. Dropout has been consistently much larger in the lowest income group, while there is a smaller differential between the middle and highest income groups. Dropout in the lowest income group converged modestly toward that in the other two groups from the early 1970s to 1992. There may have been a brief divergence through 1994, but movement toward convergence resumed in the second half of the 1990s. Unfortunately, because of the post-1990 changes in census methodology, these observations cannot be taken entirely at face value.

Across the past three decades, annual dropout rates followed different paths among white, black, and Hispanic youth. As shown in figure 7.15, the white and black time series have been roughly parallel but converged partially between the early 1970s and 1990. White and black dropout rates differed by about 4.5 points in the early 1970s, but only by about 2.5 points in the late 1980s. Since 1992 they have differed by only 1.6 to 2.3 percentage points. Hispanic dropout rates were similar to those of blacks in the 1970s, but they diverged sharply upward at the end of that decade. The annual dropout rate among Hispanics peaked at more than 10 percent in the mid-1990s, but it has since declined, remaining a few percentage points above the rate for black youth.

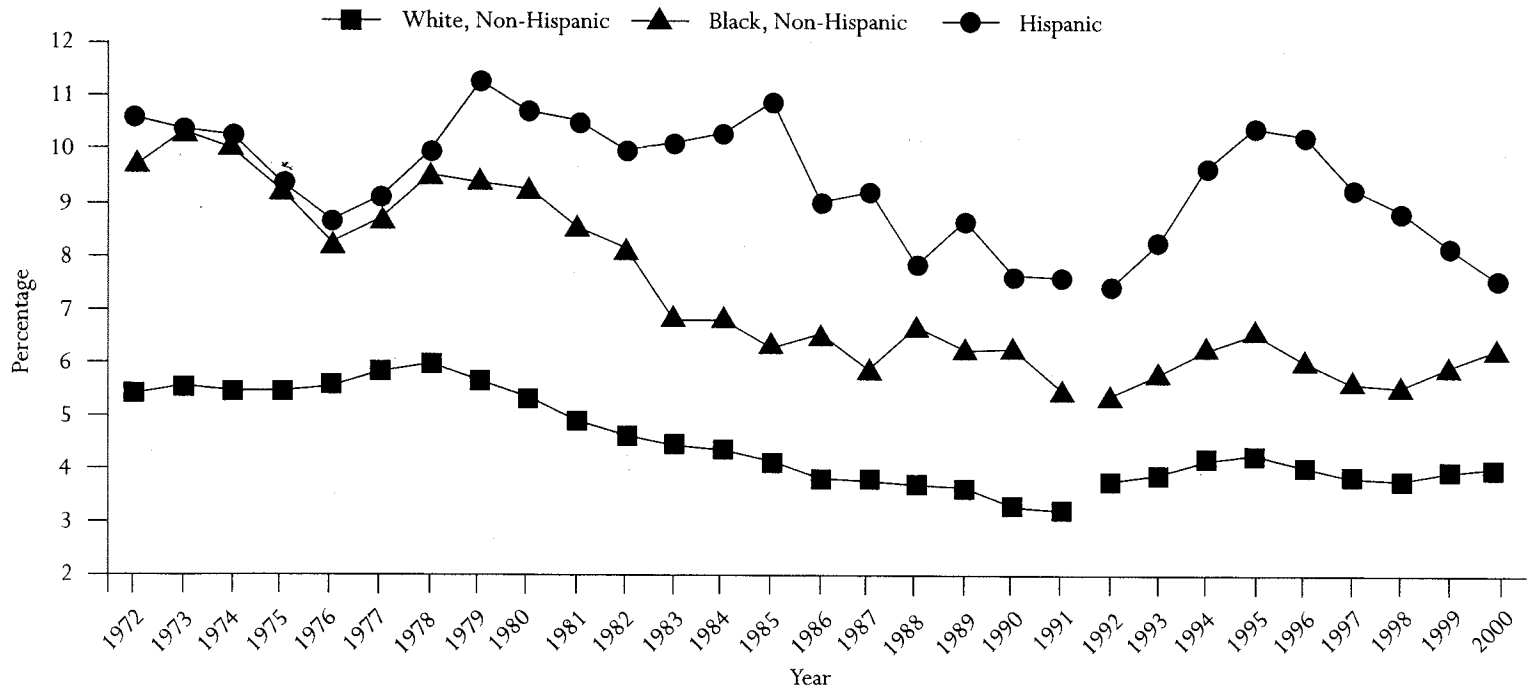
Figure 7.16 provides a very different view of trends in race-ethnic differentials in progress toward high school completion. It shows the educational status of white, black, and Hispanic youth between the ages of sixteen and twenty-four²⁷—specifically, the percentage of all youth in the age range who were not enrolled in school in October of the survey year and had not completed high school.²⁸ There is a steady downward trend in the series among

FIGURE 7.14 Annual (Event) Dropout Rate from Grades Ten to Twelve, by Family Income, 1972 to 2000



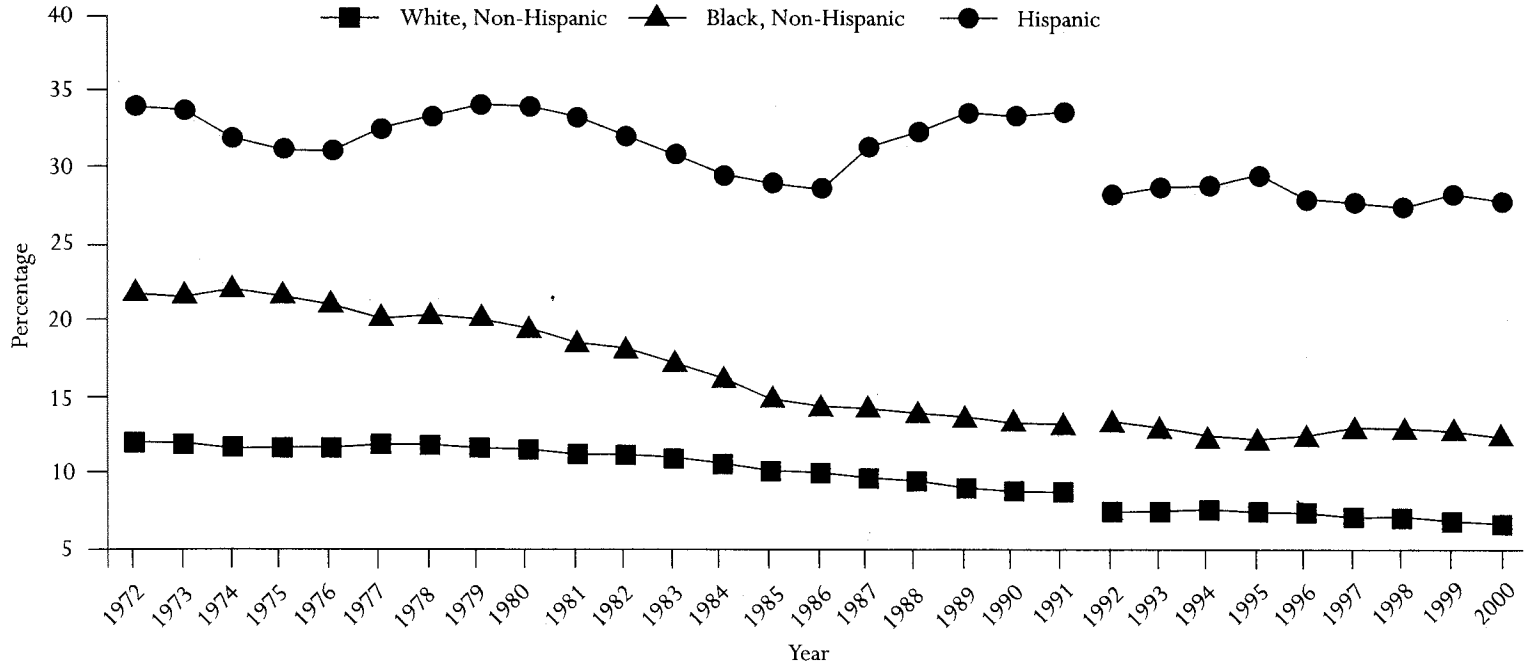
Source: U.S. Department of Commerce, U.S. Census Bureau, October Current Population Survey, as reported by National Center for Education Statistics (2002 table B-3).
 Note: Entries are two-year averages at end points and three-year averages elsewhere.

FIGURE 7.15 Annual (Event) Dropout from Grades Ten to Twelve, by Race-Ethnicity, 1972 to 2000



Source: U.S. Department of Commerce, U.S. Census Bureau, October Current Population Survey, as reported by National Center for Education Statistics (2002 table C-3).
 Note: Entries are two-year averages at end points and three-year averages elsewhere.

FIGURE 7.16 *Dropout Status at Age Sixteen to Twenty-Four, by Race-Ethnicity, 1972 to 2000*



Source: U.S. Department of Commerce, U.S. Census Bureau, October Current Population Survey, as reported by National Center for Education Statistics (2002 table B-5).
 Note: Entries are three-year averages.

blacks across the past three decades, and a similar trend among whites after 1980. However, among Hispanics the rate of noncompletion and nonenrollment has consistently been much higher than in the other two groups: it has been near or above 30 percent since the early 1970s. This is a much larger differential than that observed in the annual dropout rate, and it provides indirect evidence of the extent to which Hispanic immigrants of high school age have never enrolled in school. However, the differential between Hispanics and non-Hispanics in this series was substantially affected by the change in the CPS measure of educational attainment in 1992. It is not obvious which of the several changes in the census measure accounts for the abrupt downward shift in dropout status among Hispanics between 1990 to 1991 and 1991 to 1992—about five percentage points—but the methodological change had far less influence on the series for non-Hispanic whites and non-Hispanic blacks.

Trends and Differentials in High School Completion

Because educational attainment is, in principle, cumulative and irreversible (Duncan 1968), it should be possible, at some time in the life of a cohort, to obtain a definitive measure of the cohort's high school completion. This is easier said than done, partly because some credentials are earned later in life, and partly because researchers and policymakers like to know how far a cohort has gone in school as early as possible in the life course. One widely used (and criticized) series is educational attainment at ages twenty-five to twenty-nine (Hauser 1997; Greene 2002). The modal age of that group is about ten years beyond typical ages at high school graduation, leading to an unacceptably large lag between the measurement of high school completion and the time at which most individuals have completed it. Moreover, many individuals obtain high school equivalency credentials after the typical ages of high school completion, and there is substantial evidence that the GED is less valuable than a diploma (Cameron and Heckman 1993).

In this context, for the past several years the National Center for Education Statistics has featured an "early" measure of high school completion: the percentage of eighteen- to twenty-four-year-old youth, not currently enrolled in high school or below, who had completed high school with a diploma (or, after 1991, with a diploma or GED). A problem with this measure is that many youth, especially minority youth, are still "on track" in regular high schools at ages eighteen and nineteen (Hauser 1997). Thus, the measure tends to exaggerate race-ethnic differentials in high school completion by underestimating it among minority youth. The problem is compounded because high school completion is highly contingent among older students, so it may indicate unrealistically high levels of school completion in the majority population. For example, in the 1990s the NCES measure was above 90 percent for non-Hispanic whites but barely over 80 percent among non-Hispanic blacks. An alternative, early measure of high school completion that I have suggested elsewhere (Hauser 1997) is the percentage of *all* persons who have completed high school by ages twenty to twenty-four. This share is modestly less than completions by ages twenty-five to twenty-nine, and it covers the entire population. According to this measure, during the 1990s white high school completion levels were just over 85 percent, and the completion rate among blacks was only about five percentage points less.

Figure 7.17 shows the time series of high school completion by ages twenty to twenty-four among whites, blacks, and Hispanics from 1970 to 2000. These series were not substantially disrupted by the change in census methodology between 1991 and 1992, but growth after 1992 may have been affected by the growth in GED credentials (Kaufman, Alt, and Chapman 2001). The main features of figure 7.17 are the glacial growth in high school

completion among whites—about five percentage points over three decades—the rapid growth in high school completion among young African Americans—from barely 60 percent in 1970 to more than 80 percent throughout the 1990s—and the consistently poor showing of Hispanics.²⁹ In that group the only sustained improvement in high school completion was an increase from 60 to 65 percent during the 1990s. At the end of the twentieth century the gap in high school completion between Hispanics and blacks was about the same as that between blacks and whites thirty years earlier.

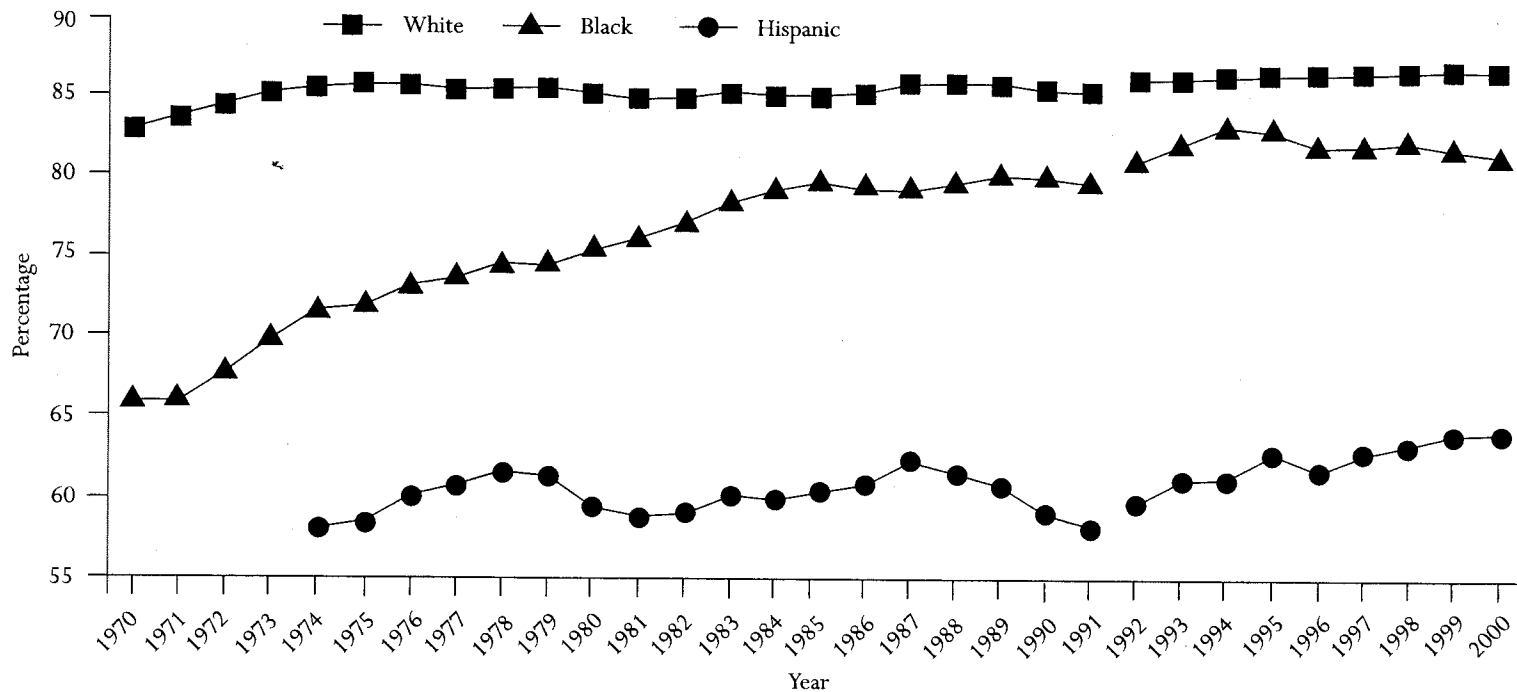
National, State, and Local Estimates of Dropout

It is difficult to monitor rates of high school dropout and completion at the national level; it is much harder to do so at the state or local level. The annual NCES dropout reports have for some years included averaged annual rates of high school completion (among persons not enrolled in school) at ages eighteen to twenty-four (Kaufman, Alt, and Chapman 2001). Because of the small number of sample cases in many states, this statistic is not highly reliable, and the defects of excluding enrolled students and including persons at ages eighteen and nineteen remain. The NCES has also reported averaged annual dropout rates for states from a federal-state cooperative program, part of the Common Core of Data (CCD). This program developed estimates of the annual dropout rate from public schools in each state that would be comparable to those in the Current Population Survey (Kaufman, Alt, and Chapman 2001, 59–61). However, only twenty-seven states comply fully with the statistical standards of the CCD, and only nine other states use methods that are similar enough to justify publication of their series in the NCES reports (Winglee et al. 2000). A recently published compendium of these estimates (Young and Hoffman 2002) covers the years 1991 to 1992 through 1997 to 1998 and classifies dropout and completion only by year, locality, gender, and race-ethnicity.

In the fall of 2001 there was national media coverage of a privately funded effort to produce a comparable series of estimates of high school graduation at the national, state, and local levels (Greene 2002).³⁰ Jay Greene proposes to estimate the high school graduation rate as the ratio of the number of high school diplomas awarded in the spring of 1998 to the number of youth enrolled in the eighth grade in the fall of 1993, after the base enrollment estimate was adjusted for change in the size of the total school population across the four-year period. His scheme yields a national graduation rate of 71 percent, far less than that estimated from CPS data, and he attributes the difference largely to the inclusion of the GED in CPS-based estimates of high school completion.

Greene surely has a valid point in arguing for the exclusion of the GED from the definition of high school completion, but beyond that his scheme has no merit. In fact, it joins the ranks of numerous, equally flawed efforts to estimate high school completion as the ratio of diplomas awarded to school enrollment in a prior year. First, at the state or local level—and even at the national level—there is a problem of population closure: students move across district, state, and national boundaries. Second, and perhaps more important—notwithstanding Greene's (2002, 3) protests to the contrary—the number of students enrolled in a prior year is not an appropriate base population for calculation of a graduation rate in a system where students are retained in grade. The reason—well understood a century ago by Leonard Ayres (1909, chs. 3, 5, and 6)—is that retained students contribute repeatedly to the denominator of such “rates,” leading to a downward bias in them.³¹ A student can appear in the numerator of Greene's “rate” only once, but he or she may appear in the denominator many times. Another way to see the weakness of Greene's

FIGURE 7.17 *High School Completion at Age Twenty to Twenty-Four, by Race-Ethnicity, 1970 to 2000*



Source: U.S. Department of Commerce, U.S. Census Bureau, October Current Population Survey.

Note: Entries are two-year averages at end points and three-year averages elsewhere.

effort is simply to look at the time series in figure 7.17: however inappropriate, the inclusion of the GED in the post-1991 classification of high school graduates had relatively little impact on the time series.

MULTIVARIATE ANALYSIS OF HIGH SCHOOL DROPOUT

My colleagues and I (Hauser, Simmons, and Pager 2000) have reported a comprehensive analysis of social and economic factors affecting high school dropout over the past three decades, based on annual dropout data from the October Current Population Survey, 1972 to 1998. Our analysis links enrollment data for more than 165,000 persons of school age with the social and economic characteristics of their households, that is, the characteristics of families and parents. Few students in the tenth to twelfth grades live outside a parental or quasi-parental household, so there is little missing data.³² It is not possible to carry out parallel analyses of dropout status (at ages sixteen to twenty-four) or of high school completion (at ages eighteen to twenty-four or ages twenty to twenty-four) because many children no longer live with their parents by age twenty.³³ As with all analyses based on census-type data, we did not have a measure of academic ability or achievement.

There are problems of population coverage in the Current Population Survey, especially for black males. For example, for Current Population Surveys in 1996, the U.S. Census Bureau reports coverage ratios of 0.83 for black men at ages sixteen to nineteen and 0.66 for black men at ages twenty to twenty-nine.³⁴ Excepting Hispanic men, for whom coverage is also poor, these are much lower than coverage ratios for other combinations of age, gender, and race-ethnicity, which typically range from 0.85 to 0.95 (U.S. Department of Commerce 2000, table 16.1). The coverage problem is corrected to some degree by the weighting procedures used by the Census Bureau.

For all covered youth, we knew age, sex, race-ethnicity, grade at risk, region of residence, and metropolitan location (Hauser, Simmons, and Pager 2000). We linked several relevant social and economic characteristics of the household and householders to the youth's record: female-headed household, employment status of household head, number of children in household, education of head, education of spouse of head, occupation of head, family income, and housing tenure.

Some believe that school location in cities versus suburbs accounts for a large share of race-ethnic differentials in dropout. For that reason, we examined trends and differentials in school dropout by location during three periods: 1972 to 1980, 1981 to 1989, and 1990 to 1998. Dropout is consistently greater in central cities. For example, during the 1990s the cumulative dropout rate was 18.0 percent in major central cities and 19.2 percent in other central cities, while it was 10.2 percent and 11.9 percent in their respective suburban rings.³⁵ In addition, the overall decline in school dropout appears in almost all areas. The decline is most consistent in the large central cities, from 23.1 in the 1970s to 21.6 in the 1980s and 18.0 in the 1990s. The largest decrease in dropout occurred in the other (small metropolitan and nonmetropolitan) areas between the 1970s and 1980s—from 19.0 percent to 13.7 percent.

The same differentials and trends by metropolitan status occurred for each major race-ethnic group. For example, clear differences in dropout between central cities and their rings occurred for whites, as for African Americans, along with a decrease in dropout rates across time. In the 1990s the cumulative dropout rate was 12.8 percent among whites and 15.0 percent among African Americans in the major central cities, while it was 8.3 percent among whites and only 7.3 percent among blacks in the suburban rings of those cities. In

other metropolitan areas, dropout was 17.0 percent among whites and 19.9 percent among blacks in the central cities, but there was a much larger differential in the suburban ring—10.3 percent among whites and 17.3 percent among blacks. Thus, neither the differential in dropout between African Americans and whites nor that between central cities and their rings is merely a consequence of racial separation between schools in those two types of areas. However, it should also be kept in mind that minorities are more likely than non-Hispanic whites to be located in the central cities, where dropout rates are higher.

The social and economic characteristics of youth and their families have large effects on school dropout. Table 7.3 shows our estimates of these effects in the 1970s, 1980s, and 1990s. Overall, dropout increases with grade level during the high school years, and the chances of dropout are much larger in the twelfth grade than in the tenth or eleventh grades. Men are consistently more likely to drop out of school than women. Family and socioeconomic characteristics have the expected effects on dropout. For example, higher family income and parental educational attainment reduce the risk of dropout, while living in a single-parent family increases the risk substantially, especially among whites. Youth who live in households with small numbers of other children and in owner-occupied housing are unlikely to drop out.

The effects of social and economic background variables on school dropout have varied modestly over the past three decades, but there has been no global tendency for them either to increase or decrease. For example, the effect of family income was $-.290$ in the 1970s, $-.255$ in the 1980s, and $-.330$ in the 1990s. The only family background variable whose effect even appears to have increased regularly across time is living in a female-headed family. After controlling other variables, residence in a female-headed family increased the odds of school dropout by about 19 percent in the 1970s, by 23 percent in the 1980s, and by almost 46 percent in the 1990s. However, even with more than 165,000 observations, the difference between the effect in the 1970s and that in the 1990s is not statistically significant at even the 5 percent level.

The distributions of many of the social and family background variables have not changed substantially across the past three decades, but there has been a notable increase in single-family households, a decrease in the number of children in households, and a substantial increase in parental levels of education. These changes in social background account for part, but not all, of the decline in high school dropout among blacks and whites from the 1970s to the 1990s.

There are very large differences in social, economic, and family background between white, black, and Hispanic youth. We have seen that observed differences in high school dropout among the groups are quite large, but we find that these are fully explained by intergroup differences in background (Hauser, Simmons, and Pager 2000). The estimated effects of being anything other than white and non-Hispanic are negative in table 7.3. That is, social background rather than race-ethnicity per se accounts for the intergroup differences in high school dropout. Moreover, since our analysis does not control for academic achievement, while blacks and Hispanics perform far below whites, our findings imply that minority dropout levels are much lower than those among whites with similar levels of academic achievement and social background.

We also found that age has *very* large effects on school dropout. For example, independent of all other variables, black youth were 150 percent more likely to drop out at age nineteen than at age seventeen and 300 percent more likely to drop out at age twenty than at age seventeen. The effects of age are similar, but somewhat smaller, among whites and Hispanics. Since grade level is constant in our analyses, by construction, the implication is

that students who are over-age for grade are exceptionally likely to drop out of high school. We were scarcely novel in pointing to the role of age-grade retardation in school dropout. Our work simply documented, on a large scale and across several decades, a finding that has appeared in one study after another (Grissom and Shepard 1989; Temple, Reynolds, and Miedel 2000; Roderick 1993; Anderson 1994; Rumberger and Larson 1998; Alexander, Entwisle, and Dauber 1994).

THE POLICY CONTEXT OF GRADE RETENTION AND SCHOOL DROPOUT

The continuing push for higher standards in elementary and secondary education, exemplified by the policy initiatives of the Clinton and Bush administrations, has seemingly obvious implications for high school completion and dropout. As grade retention increases, high school dropout will eventually increase as well, though perhaps with a delay of some years. When a child is retained in the third or fourth grade, with the best of intentions, the stage is set for that child to be over-age for grade some years later during high school. The belief, contrary to most evidence, that retention is helpful to students is sustained in part by the lengthy gap between the retention decision and its effects.

The future course of high school dropout will probably also be affected by the combination of grade retention practices with the use of high-stakes tests, both to retain students and to certify their competence as high school graduates. The direct effect of a high school exit exam is to deny high school diplomas to students who fail the test—usually after repeated administrations of it. In the terms of the educational classification system now used by the U.S. census, exit test failure classifies students as having completed twelve years of school, but with no diploma. Such individuals are classified as dropouts or noncompleters unless they subsequently pass a high school equivalency examination. It is less clear how these people will fare in the labor market—or even in access to postsecondary education. The available evidence, for example, from the Texas Academic Assessment System (TAAS) and the Massachusetts Comprehensive Assessment System (MCAS), suggests much higher failure rates will occur in minority populations than among non-Hispanic whites. A similarly large-scale trial of exit examinations is about to take place in New York State and several other states. It is not clear whether such tests will be modified to increase pass rates, or whether a backlash against their use will occur when very large numbers of students fail.

Exit exams may also have important indirect effects on high school completion. First, there has been widespread speculation that the introduction of high school exit exams will discourage many poorly performing students from continuing in high school. There is as yet little evidence to support or disprove this hypothesis. Second, in Texas, Walter Haney (2000) has argued, there is administrative and political pressure on schools to achieve high pass rates on the TAAS, which is first administered in the tenth grade. This pressure leads to very high retention rates, especially of minority students, in the ninth grade—and to their early departure from high school.³⁶ This is a highly controversial argument (Toenjes and Dworkin 2002; Haney 2001; Carnoy, Loeb, and Smith 2001), and the evidence for and against it deserves detailed examination. One of the ironies of current debates about the effects of TAAS is that much of the evidence so far proposed is based on ratios of high school completion in a target year to enrollment in the ninth or sixth grade three or six years earlier. Such data bear the same fatal flaw that Leonard Ayres (1909, chs. 3, 5, and 6) identified a century ago in parallel data about the completion of elementary school: cumulative retention invalidates earlier grade-level populations as a base for the graduation rate.

TABLE 7.3 *Effects of Social Background and Geographic Location on High School Dropout in the 1970s, 1980s, and 1990s*

	1970s (N = 66,762)			1980s (N = 56,567)			1990s (N = 44,064)		
	Coefficient	Standard Error	EXP (Coefficient)	Coefficient	Standard Error	EXP (Coefficient)	Coefficient	Standard Error	EXP (Coefficient)
Race-ethnicity									
White	—	—	1.000	—	—	1.000	—	—	1.000
African-American	-0.654	0.058	0.520	-0.527	0.070	0.590	-0.667	0.086	0.513
Hispanic	-0.593	0.076	0.553	-0.288	0.083	0.750	-0.147	0.091	0.863
Other	-0.741	0.128	0.477	-0.660	0.118	0.517	-0.320	0.115	0.727
Gender, grade, and dependency status									
Male (grade 10 and dependent)	—	—	1.000	—	—	1.000	—	—	1.000
Female (grade 10 and dependent)	-0.425	0.065	0.654	-0.207	0.083	0.813	-0.196	0.105	0.822
Grade 11	0.406	0.067	1.500	0.273	0.084	1.314	0.477	0.108	1.612
Grade 12	1.148	0.075	3.150	0.818	0.092	2.266	2.094	0.116	8.119
Female and grade 11	0.017	0.088	1.017	-0.142	0.109	0.868	-0.025	0.137	0.975
Female and grade 12	-0.219	0.087	0.804	-0.223	0.106	0.800	-0.163	0.127	0.849
Grade 11 and nondependent	-0.214	0.126	0.807	-0.243	0.150	0.784	-0.435	0.178	0.647
Grade 12 and nondependent	-1.453	0.120	0.234	-0.987	0.140	0.373	-1.363	0.165	0.256
Nondependent	1.884	0.122	6.579	1.461	0.141	4.309	1.579	0.165	4.849
Female and nondependent	0.782	0.093	2.185	0.563	0.108	1.755	0.468	0.125	1.596
Age									
Ages fourteen and fifteen	0.871	0.087	2.389	0.326	0.128	1.385	0.464	0.142	1.590
Age sixteen	0.128	0.057	1.136	-0.146	0.076	0.865	0.171	0.089	1.186
Age seventeen	—	—	1.000	—	—	1.000	—	—	1.000
Age eighteen	-0.355	0.053	0.702	0.088	0.064	1.092	-0.324	0.079	0.723
Age nineteen	0.253	0.069	1.288	0.602	0.080	1.826	0.012	0.096	1.012
Age twenty	0.784	0.103	2.191	1.136	0.117	3.113	0.757	0.130	2.133
Ages twenty-one and twenty-two	1.094	0.113	2.987	1.673	0.122	5.326	0.895	0.147	2.447
Ages twenty-three and twenty-four	0.656	0.155	1.927	1.731	0.148	5.645	0.868	0.201	2.382

Metropolitan status									
Major central city	—	—	1.000	—	—	1.000	—	—	1.000
Major suburb	-0.285	0.074	0.752	-0.257	0.092	0.773	-0.119	0.109	0.888
Other central city	-0.098	0.066	0.906	-0.138	0.081	0.872	0.206	0.097	1.229
Other suburb	-0.260	0.067	0.771	-0.214	0.082	0.808	-0.055	0.097	0.947
Other	-0.263	0.062	0.769	-0.353	0.075	0.703	-0.126	0.091	0.881
Region									
East	—	—	1.000	—	—	1.000	—	—	1.000
Midwest	0.134	0.053	1.143	0.093	0.066	1.098	0.259	0.080	1.295
South	0.344	0.052	1.411	0.377	0.063	1.458	0.457	0.078	1.579
West	0.295	0.056	1.342	0.401	0.066	1.494	0.272	0.080	1.313
Family background									
Log (family income)	-0.290	0.032	0.748	-0.255	0.035	0.775	-0.330	0.040	0.719
Homeownership	-0.559	0.041	0.572	-0.539	0.049	0.583	-0.518	0.059	0.596
Head's K-12 education	-0.059	0.010	0.942	-0.053	0.013	0.949	-0.039	0.017	0.962
Head's postsecondary education	-0.084	0.020	0.919	-0.139	0.024	0.870	-0.129	0.027	0.879
Spouse's K-12 education	-0.110	0.009	0.896	-0.067	0.011	0.935	-0.025	0.014	0.976
Spouse's postsecondary education	-0.116	0.022	0.890	-0.119	0.022	0.888	-0.151	0.025	0.860
Head with no occupation	0.226	0.072	1.254	0.249	0.077	1.282	0.175	0.096	1.192
Head's occupational status	-0.011	0.002	0.989	-0.010	0.002	0.990	-0.005	0.002	0.996
Head in a farm occupation	-0.418	0.097	0.659	-0.663	0.152	0.515	-0.324	0.191	0.724
Spouse's occupational status	0.000	0.010	1.000	-0.023	0.012	0.977	-0.023	0.012	0.977
Female-headed family	0.173	0.074	1.188	0.210	0.086	1.233	0.378	0.104	1.459
Total number of children in household	0.078	0.011	1.081	0.072	0.016	1.075	0.110	0.020	1.116
Constant	2.042	0.329	—	1.279	0.368	—	0.097	0.438	—

Source: Author's compilation.

Note: Analyses also control for year and for missing data on some household variables.

The TAAS system has been in place for several years, and it will soon be replaced by a new test with a higher passing threshold.³⁷ A definitive analysis of the aggregate and distributional effects of the TAAS could be of great value in the development and assessment of educational policy.

We might have expected high school graduation to have become virtually universal in the United States by the beginning of the twenty-first century. Instead, growth in high school completion has been glacial in most American population groups over the past thirty years. The major exception is the African American population, which made major advances during this period. Is there any reason to expect that high school education will approach universality in the current policy climate? On the contrary, new educational policies are likely to increase retention and encourage dropout in the name of high standards. Nearly a century ago, Leonard Ayres pointed to compulsory school attendance as a key to the successful extension of schooling, and he complained about school regimes that regularly retained students so as to guarantee that they would not complete elementary school before exceeding the age of compulsory student attendance. There is a similar and growing inconsistency today between the emerging school regime and the requirements of school attendance. Absent an increase in the legally permissible age at school-leaving—a policy change that is not on anyone's agenda—it is likely that high school completion will become less prevalent and less equally distributed over the coming decade.

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NOTES

1. Angus, Mirel, and Vinovskis (1988) review the development of graded schooling in the midnineteenth century and the later introduction of age-grading. In his useful history of school-leaving in the United States, Sherman Dorn (1996) focuses on the invention of the problem of high school dropout in the early 1960s.
2. From 1974 through 1991, about half of high school graduates ages twenty-five to thirty-four had completed at least some college (U.S. Department of Commerce 2001). Beginning in 1992, the percentage with some college rose rapidly to 65 percent in 2000. From 1940 to 1974, the percentage of high school graduates with college experience rose only from 38 to 47 percent at ages thirty-five to forty-four, while the percentage of persons who graduated from high school rose from 35 to 80 percent. Thus, through much of the twentieth century the rise in college attendance and completion was driven by growth in high school completion, not by increased chances of going from high school to college.
3. In the *Boston Herald*, Ed Hayward (2000) quotes author and state school board member, Abigail Thernstrom, as saying, "Suppose the dropout rate goes up slightly, but the skills of the kids who stay become significantly stronger. We'll be better off."
4. For a striking contrast, see the account by Angus, Mirel, and Vinovskis (1988, 227–31) of the development and rationale for social promotion during the 1930s.
5. Full-text searches in these volumes for the strings "retention," "retain," "promote," and "failure" yielded no relevant hits.
6. For some historic data on age-grade retardation at the state level, see Angus, Mirel, and Vinovskis (1988, 226–27).

7. To estimate each rate, I multiplied the complements of the reported failure rates across grade levels to estimate the probability of never having failed. The complement of that probability is the estimated probability of having failed at least once.
8. Since 1990 the annual decennial censuses have been of limited value in tracking retention. The censuses of 1990 and 2000 did not obtain data on grade of current enrollment, and exact grade completed was not ascertained below the ninth grade.
9. Data on school enrollment by single years of age, grade in which enrolled, gender, and race-ethnicity have been published in aggregate form in *Current Population Reports* for all years since 1971, and the data are available in unit record form from 1968 onward.
10. The October supplement did ask specifically about grade retention in 1992 and 1995.
11. This section is based on, but updates, material in Hauser (2001).
12. The percentages include those enrolled below the first-grade level and a small share of six-year-olds who were not enrolled in school. The data are virtually unchanged if non-enrolled children are eliminated from the analysis: neither the trends nor the differences by race-ethnicity and gender are affected.
13. Another relevant factor is change in state or local requirements about the exact age a child must reach before entering kindergarten or first grade.
14. These data have been assembled from U.S. Department of Commerce, U.S. Census Bureau, Table A-3, "Historical Statistics: Persons Six to Seventeen Years Old Enrolled Below Modal Grade, 1971 to 2000," available at www.census.gov/population/socdemo/school/tabA-3.pdf, and from "School Enrollment: Social and Economic Characteristics of Students," *Current Population Reports*, P-20 series, nos. 241, 260, 272, 286, 303, 319, 333, 346, 360, 400, 408, 413, 426, 439, 443, 452, 460, 469, 474, 479, 487, 492, 500, 516, 521, and 533.
15. We ignore the logical possibility that age-retardation at younger ages could be counterbalanced by double-promotion at older ages.
16. Figure 7.3 is substantially revised from Hauser (2001, 162) to correct an error as well as update data through 2000. In the earlier paper, I erroneously arrayed the data to display cross-sectional differences in retention by age at the survey year, rather than arraying them by age at school entry to display intracohort change in age-grade retardation.
17. Again, early school dropout (at ages fifteen to seventeen) is counted as age-grade retardation.
18. Dropout by ages fifteen to seventeen does not indicate ultimate rates of failure to complete high school because large numbers of youth complete regular schooling through age nineteen or, alternatively, pass the GED exam through their late twenties (Hauser 1997).
19. The figures are based on my tabulations of data from the October Current Population Surveys, 1972 to 2000. Income groups are based on price-adjusted family incomes over the entire period, not on year-by-year distributions of family income.
20. Note the difference between the vertical scales of figures 7.11 and 7.12.
21. In part, this review updates Hauser (1997).
22. However, the operational definition of 90 percent high school completion has varied from time to time (Hauser 1997). Early in 2002 Congress dissolved the National Educational Goals Panel.
23. See Hauser (1997) for a more extensive review of the measurement of high school dropout and completion.
24. For further discussion of the conceptualization and measurement of high school dropout, see Kominski (1990), Pallas (1989), and Kaufman (2000). State and local estimates are discussed later in the chapter.
25. There were also minor breaks in the series between 1986 and 1987, when new editing rules were adopted, and in 1994, when the CPS began to use computer-assisted interviewing technology (Kaufman, Alt, and Chapman 2001, app. D).
26. The effect of the changing definition is especially large among overage students covered by the annual dropout concept, that is, persons ages twenty to twenty-four, and there is scarcely a blip in the series below age twenty. Thus, an alternative to revising the definition of high school completion used in the series would be to limit the dropout rate to students ages fifteen to nineteen.
27. Because individuals in the upper half of this age range are unlikely to live with their parents, it is not possible to assess differentials in this dropout measure by social and economic background using the October CPS data.

28. In principle, this measure is also affected by the post-1990 changes in the definition of high school completion, but the shift in the time series after 1991 appears to be very small.
29. Again, the rate of high school completion among Hispanics is undoubtedly lowered by the presence of poorly educated immigrants.
30. Actually, Greene (2002) produced estimates for only one year, 1998. If his estimates were valid, they could be produced for other years.
31. In this context, it is almost amusing to read Greene's (2002, 6–7) effort to explain the inconsistency between his estimate of the high school graduation rate among African Americans of 56 percent and the 73 percent high school completion rate estimated by NCES. Greene fails to consider the effect of grade retention on base enrollment in the black population, and he ends up suggesting that black youth simply lie about whether they have completed high school.
32. Over the past three decades, 3.1 percent of youths have been nondependent at the tenth-grade transition; 5 percent have been nondependent at the eleventh-grade transition; and 11.8 percent have been nondependent at the twelfth-grade transition.
33. However, it would be possible to analyze dropout *status* at a younger age, say, sixteen to nineteen, the age range within which the Annie E. Casey Foundation has recently assessed progress toward high school graduation.
34. The annual dropout measure is based on persons ages fifteen to twenty-four.
35. Cumulative dropout was estimated by projecting the effect of the annual dropout rate over a three-year period (Hauser, Simmons, and Pager 2000, 5).
36. In the *GI Forum* case, a federal judge found that the TAAS exit exam had a disparate impact on minority students, but held that its use was legal because the state of Texas had introduced the test with the intention of improving the quality of education.
37. When it was introduced, the passing standard of the TAAS was at the twenty-fifth percentile.

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