RACE-ETHNICITY, SOCIAL BACKGROUND, AND GRADE RETENTION

Robert M. Hauser, Devah I. Pager, and Solon J. Simmons

Center for Demography and Ecology
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ABSTRACT

Despite the visible popularity of policies “to end social promotion,” little is known about the prevalence of grade retention in American schools or about the effects of race-ethnicity and other social and economic background characteristics on retention. We review the policy context of school retention and show that grade retention has been common and growing in American schools from the 1970s to through the 1990s. Our analysis focuses on the period from 1974 to 1990 and on grade retardation at age 15, when youth are old enough to have experienced grade retention, but have rarely dropped out of school. The odds of grade-retardation among African-American and Hispanic youth are twice those among White youth, but these differentials are almost entirely explained by social and economic deprivation among minority youth, along with unfavorable geographic location. Because rates of age-grade retardation have increased at the same time that social background conditions have become more favorable to rapid progress through school, the observed trend toward more age-grade retention substantially understates growth in the practice of holding students back in school. While there is presently little direct evidence of race-ethnic discrimination in progress through the elementary and secondary grades, the recent movement toward test-based educational decision-making could magnify race-ethnic differentials in retention.
Recent proposals for test-based grade promotion and retention are based on politically attractive, but scientifically unsupported claims about the benefits of retention, and minority students are more likely to be subject to them. Sound bites about “ending social promotion” are appealing to politicians and to the general public. Sound data about rates, trends, and differentials in grade retention are scarce, and current retention rates are much higher than is generally believed. In this paper, we review recent developments in retention policy and national trends in age-grade relationships in elementary and secondary school. Then we report new analyses of race-ethnic differentials in grade retention in the context of group differences in social and economic background.

At least 15 percent of pupils are retained between ages 6 to 8 and ages 15 to 17, and a large share of retention occurs either before or after those ages (National Research Council 1999, Hauser 1999). Retention rates are much higher for boys and members of minority groups than for girls or the White majority. Retention rates have also grown substantially over the past two decades.

The scientific evidence about the effects of retention in grade is strong and clear: The academic benefits of retention typically are both ephemeral and costly (Holmes 1989, Hauser 1999). When previous academic performance and relevant social characteristics are controlled, past grade retention accelerates current school dropout (Rumberger and Larson 1998). There is no evidence for claims that new retention policies will be coupled with effective remediation of learning deficits that would be worth their cost or would offset the well-established long-term negative effects of retention (Hauser 1999, Roderick, et al. 1999, Moore 1999).

The typical organization of American schools into grades by the ages of their students is challenged by large variations in achievement within ages and grades. The resulting tension is
reduced somewhat by overlap in the curriculum from one grade to the next. It is also reduced by strategies for grouping students by observed levels of aptitude or mastery: These include special education placement, academic tracking, extended kindergarten, and grade retention. 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. Data on early school transitions and on the possible reasons for change in those transitions are grossly inadequate, but it would appear that retention in pre-kindergarten and kindergarten has played some role in the rise of age at entry into the first grade. 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.

Socially differentiated patterns of grade retention develop rapidly after entry into graded school, and they persist through secondary school. White girls progress through school most rapidly, while African-American boys are most often held back in grade. By ages 15 to 17, about 30 percent of White girls, but close to half of African-American boys are below the modal grade for all students of their age—or have left school. Rates of grade retardation at those ages have remained high, even though school dropout has declined.

Given the high rates of retention created by current evaluation practices—and their disparate impact on minority youth—the possibility of substantially increased, test-based retention creates a number of concerns. For example, the costs of grade repetition are large—both to those retained and those who must pay for repeated schooling. The presence of older students creates serious management problems for schools. Most important, the available evidence shows that retention has no lasting educational benefits, that it typically leads to lower achievement (than promotion) and to higher rates of school dropout.
It is possible to imagine an educational system in which test-based promotion standards are combined with effective diagnosis and remediation of learning problems, yet past experience suggests that American school systems may not have either the will or the means to enact such fair and effective practices. Such a system would include well-designed and carefully aligned curricular standards, performance standards, and assessments. Teachers would be well trained to meet high standards in their classrooms, and students would have ample notice of what they are expected to know and be able to do. Students with learning difficulties would be identified years in advance of high-stakes deadlines, and they and their parents and teachers would have ample opportunities to catch up before deadlines occur. Accountability for student performance would not rest solely or even primarily on individual students, but also, collectively, on educators and parents. There is no positive example of such a system in the United States, past or present, whose success is documented by credible research.

While the disproportionate rates of grade retention among minorities are both large and of long standing (U.S. Bureau of the Census 1979, National Research Council 1999, Hauser 1999), 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, one can look back only to a few simple tabulations from the 1976 Survey of Income and Education (U.S. Bureau of the Census 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.

In this paper, we report preliminary analyses of race-ethnic differences in age-grade retardation among 15 year-olds, using data from October Current Population Surveys from 1974 to
Age 15 is especially appropriate for such an analysis because it precedes almost all school dropout, but it is old enough for clear patterns of differential retention to have occurred. As Hauser (1999) has shown, the gender differential in retention occurs as early as kindergarten, but socioeconomic differentials develop after entry to graded school.

The data file of 15 year-olds, which includes approximately 32,800 Whites, 5,800 African-Americans, 2,900 Hispanics, and 1,300 youth from other race-ethnic groups, is drawn from the Uniform October Current Population Survey file, 1968–1990 (Hauser, et al. 1993, Hauser and Hauser 1993). The file attaches characteristics of households and of householders to demographic characteristics and enrollment data for school-age youth. For each youth in the sample, we know sex, race-ethnicity, enrollment status, grade level, region of residence, and metropolitan location. The analysis is restricted to dependents—those who are a child or other relative of the householder and are not a householder or spouse of a householder. We have linked several relevant social and economic characteristics of the household and householders to the youth’s record: female-headed household, head without occupation, education of household head, education of spouse of head, occupation of household head, family income, and housing tenure.

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2 We are currently preparing uniform extracts of data for children and youth in more recent October Current Population Surveys, and we expect to include the period 1974 through 1998 in the final version of the paper.

3 In the final version of the paper, we will report parallel analyses by single year of age from 6 through 17.

4 A very small fraction of the sample is not enrolled in school, and those individuals are classified as below the modal grade level for their age.

5 The number of children in the household has not been included in these preliminary analyses, but will be added in the final version of the paper.
SOCIAL PROMOTION, RETENTION, AND TESTING

Much of the current public discussion of high-stakes testing of individual students centers on calls 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. As recently as 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 administration’s proposals for educational reform strongly tie the ending of social promotion to early identification and remediation of learning problems. The president calls 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 calls for “appropriate use of tests and other indicators of academic performance in determining whether students should be promoted” (Clinton 1998:3). The key questions are whether testing will be used appropriately in such decisions and
whether early identification and remediation of learning problems will take place successfully.

Test-based requirements for promotion are not just being proposed; they are being implemented. According to a report by the American Federation of Teachers (1997b), 46 states either have or are in the process of developing assessments aligned with their content standards. Seven of these states, up from four in 1996, require schools and districts to use the state standards and assessments in determining whether students should be promoted into certain grades.  

For some years, Iowa and California had taken strong positions against grade retention, based on research or on the reported success of alternative intervention programs (George 1993, Iowa Department of Education, et al. 1998). But California’s past policies have been repudiated by the new governor, Gray Davis, who has promoted a legislative package that will mandate test-based grade retention in elementary and secondary schools.

Governor Bush of Texas has 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). Texas is exceptional among states in its regularly reports of retention rates by grade level and race-ethnicity. Even in the absence of test-based retention, these rates are high, especially among African-American and Hispanic youth. Retention rates have been stable and high from 1990 onward, well before the new initiatives to “end social promotion.” For example, if all

6 The states are Arkansas, Florida, Louisiana, New Mexico, North Carolina, South Carolina, and West Virginia. A report from the Council of Chief State School Officers (1998) lists five states with required testing for promotion: Louisiana, North Carolina, New York, South Carolina, and Virginia.
Texas students were subject to the failure rates of 1996-97, 17 percent would fail at least once between the 1st and 8th grades, and 32 percent would fail at least once between the 9th 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.  

In 1998 New York City Public School Chancellor Rudy Crew proposed that 4th and 7th graders be held back if they fail a new state reading test at their grade level, beginning in spring 2000. Crew’s proposal initially combined testing of students with “a comprehensive evaluation of their course work and a review of their attendance records.” A two-year delay in implementation of the tests would permit schools “to identify those students deemed most at risk and give them intensive remedial instruction” (Steinberg 1998a). However, late in the spring of 1999, under intense political pressure, Crew abandoned established policies and ordered thousands of third and sixth graders who had performed poorly on a new reading test to attend summer school and pass a new test at summer’s end or be held back a year. The New York Public Schools were promptly sued for violating their own rules (Archibold 1999a, New York Times 1999). The inappropriate reliance on a single test performance came back to haunt the Crew administration when it turned out that the test was improperly normed, and thousands of students had been failed when they should have passed (Hartocollis 1999, Archibold 1999b).

In 1996-1997 the Chicago Public Schools instituted a new program to end social promotion. Retention decisions are now based almost entirely on student performance on the Iowa

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7 To estimate these rates, we multiplied the complements of the reported failure rates across grade levels to estimate the probability of never being failed. The complement of that estimate is the probability of having failed at least once.
Test of Basic Skills (ITBS) at the end of grades 3, 6, and 8. Students who fall below specific cutoff scores at each grade level are required to attend highly structured summer school programs and to take an alternative form of the test at summer's end. At the end of the 1996-1997 school year, it was initially reported that 32 percent, 31 percent, and 21 percent of students failed the initial examination at grades 3, 6, and 8, respectively. Out of 91,000 students tested overall, almost 26,000 failed. After summer school, it was reported that 15 percent, 13 percent, and 8 percent of students were retained at the three grade levels (Chicago Public Schools 1998a).

The most recent reports on Chicago’s retention policy provide an even less sanguine picture. For example, among 3rd graders, 30.5 percent were excluded from testing because they were in special education or were bilingual students. Of the remainder, 48.7 percent failed the spring 1997 exam. Of those who failed and remained in the public schools, 33.0 percent passed the ITBS at summer’s end and were promoted, 21.2 percent failed and were promoted anyway, and 40.8 percent failed and were retained for a second year in the 3rd grade. In the next year, the test score gain among students who were retained was indistinguishable from that among students

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8 The 1997-1998 Guidelines for Promotion in the Chicago Public Schools also list minimum report card requirements and a minimum attendance requirement, but “students who score at or above grade level on both the Reading and Mathematics sections of the ITBS are excepted from the latter requirement” (Chicago Public Schools 1997a). This use of the ITBS appears to be in conflict with the publisher’s recommendations about “inappropriate purposes” of testing: “If a retention decision is to be made, classroom assessment data gathered by the teacher over a period of months is likely to be a highly relevant and accurate basis for making such a decision. A test score can make a valuable contribution to the array of evidence that should be considered. However, a test score from an achievement battery should not be used alone in making such a significant decision” (Hoover, et al. 1994). However, the test publisher (but not the developers) have endorsed this use of the ITBS by the Chicago Public Schools.

9 The initial report was that between 2 and 3 percent of students failed the initial exam at each grade level but were ultimately “waived” into the next grade, but in fact waivers were frequent (Moore 1999).
who had failed the summer test and been promoted; moreover, fewer than half of the retained students passed the ITBS after the retention year or the following summer (of 1998) (Roderick, et al. 1999:12-13). Data from the Chicago Public Schools show that “African American students were 4.5 times more likely to be retained than White students in 1997. And Latino students were nearly three times more likely to be retained than White students in 1997” (Moore 1999:3).

The current enthusiasm for the use of achievement tests to end social promotion raises several concerns. First, much of the public discussion and some recently implemented or proposed testing programs appear to ignore existing professional and scientific standards for appropriate test use (National Research Council 1999:Ch. 6). These standards have been adopted in large part in the current draft of the Department of Education’s legal guidance for making high stakes decisions about students (U.S. Department of Education 1999a).

Second, there is persuasive research evidence that grade retention typically has no beneficial academic or social effects on students. The past failures of grade retention policies need not be repeated. But they provide a cautionary lesson: Making grade retention—or the threat of retention—a fair and effective educational policy requires consistent and sustained effort.

Third, public discussion of social promotion has made little reference to current retention practices—in which a very large share of American schoolchildren are already retained in grade. In part, this is because of 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

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10 The failure of past programs is recognized in President Clinton's initiative to end social promotion: “Ending social promotions by simply holding more students back is the wrong choice. Students who are required to repeat a year are more likely to eventually drop out, and rarely catch up academically with their peers. The right way is to ensure that more students are prepared to meet challenging academic standards in the first place” (Clinton 1998).
possible to describe rates, trends, and differentials in grade retention using data from the U.S. Bureau of the Census, but these data have not been used fully to inform the public debate.

Fourth, available data suggest that retention has a disparate impact on minority youth. At present, retention based on test-scores alone is rare, but new and proposed policies in several states and localities focus on achievement test scores as a sole or limiting factor in promotion decisions. Not only are achievement test scores notably lower in minority than in majority populations, but most of the test score gap is not explained by group differences in social or economic background. Thus, one might well expect race-ethnic differentials in retention to increase as achievement tests become the main or sole criterion for promotion. For this reason, especially, we think it is useful to provide baseline estimates of differential retention among minority youth and of the role of social and economic background in those differentials.

**TRENDS AND DIFFERENTIALS IN GRADE RETENTION**

No federal or independent agency monitors social promotion and grade retention. We doubt that governments currently make important policy decisions about any other social process with so little in the way of sound, basic, descriptive information. 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, National Research Council 1999, Hauser 1999). 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.

The main federal source of information about education, The National Center for Education Statistics, 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 compendia, the *Digest of Education Statistics* (National Center for Education Statistics 1999a) and the *Condition of Education* (National Center for Education Statistics 1999b).

The best current source of information on national levels, trends, and differentials in grade retention is the Current Population Survey (CPS) of the U.S. Bureau of the Census. Using published data from the annual October School Enrollment Supplement of the CPS, it is possible to track the distribution of school enrollment by age and grade each year for groups defined by sex and race/ethnicity. 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 high-stakes testing in grade retention. 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 6-year-old children were enrolled below the 1st grade in October of 1994. If 15 percent of those children were enrolled below the 2nd grade in October of 1995, when they were 7 years old, we would infer that at least 5 percent were held back in the 1st grade between 1994 and 1995.

One egregious exception to the lack of federal information about grade retention and promotion is a new Education Department publication, *Taking Responsibility for Ending Social Promotion: A Guide for Educators and State and Local Leaders* (U.S. Department of Education 1999b). While it also cites more reputable estimates of grade retention, the *Guide* features a
“conservative” estimate from “1996 Current Population Statistics” that “only about 3 percent of students are two or more years over age for their grade (an indication that they have been retained at least once)” (p. 6). This estimate is indefensibly low for three reasons. First, it covers only currently enrolled students, ignoring persons of normal school age who have fallen behind and dropped out. Second, by referring to K-12 students at all grade levels, it aggregates data for children in the primary grades, who have had few years at risk of retention, with data for children in higher grades, who have had many years at risk of retention. Third, by counting as “retained” only those students who are two or more years above the modal age for their grade, the Guide fails to include a large number of retained students. We cannot think of any rationale for this statistic, other than an effort to mislead the public about the true extent of grade retention.

**Retention in the Primary and Secondary Grades**

Age-grade retardation refers to enrollment below the modal grade level for a child’s age (and no broader meaning is either intended or implied). We have examined national rates of age-grade retardation by age, sex, and race ethnicity for three-year age groups at ages 6 to 17 from 1971 to 1996 and, also, at parallel tabulations for young children by single years of age, 1971 to 1996. In each case, we have organized the data by birth cohort (year of birth), rather than by

11 There is no such publication as “Current Population Statistics.” Apparently, the reference is to *Current Population Reports*, Series P-20, No. 500, which reports school enrollment by age in October 1996. However, we cannot reproduce exactly the estimates reported in the Guide, and the Department of Education has not responded to our request for their source.
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.\textsuperscript{12}

The recent history of age-grade retardation is summarized in Figure 1. It shows age-grade retardation at ages 6 to 8, 9 to 11, 12 to 14, and 15 to 17 among children who reached ages 6 to 8 between 1962 and 1996. The horizontal axis shows the year in which an age group reached ages 6 to 8, 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 6 to 8 years old in 1987 – the most recent cohort whose history can be traced all the way from ages 6 to 8 up through ages 15 to 17. At ages 6 to 8, 21 percent were enrolled below the modal grade for their age. By 1990, when this cohort reached ages 9 to 11, age-grade retardation grew to 28 percent, and it was 31 percent in 1993, when the cohort reached ages 12 to 14. By 1996, when the cohort reached ages 15 to 17, the percentage who were either below the modal grade level or had left school was 36 percent. Almost all of the growth in retardation after ages 12 to 14, however, was due to dropout (4.8 percent), rather than grade retention among the enrolled.

One could read the rate of enrollment below the modal grade at ages 6 to 8 as a baseline measure, that is, as if it did not necessarily indicate that grade retention had taken place. Relative to that baseline, increases in enrollment below the modal grade at older ages clearly show the net

We ignore the logical possibility that age-retardation at younger ages could be counter-balanced by double-promotion at older ages. This way of looking at the data surely understates the prevalence of grade retention, for much of it occurs within or below ages 6 to 8.

The series for ages 15 to 17 includes early school dropout, which is also shown as a separate series along the bottom of the figure. Dropout, rather than retention, evidently accounts for a substantial share of the increase in age-grade retardation between ages 12 to 14 and ages 15 to 17.

The trend in age-grade retardation at ages 6 to 8, 9 to 11, 12 to 14, and 15 to 17 can be read across Figure 1 from left to right. Age-grade retardation increased in every age group from cohorts of the early 1970s through those of the middle to late 1980s. Age-grade retardation increased at ages 15 to 17 after the mid-1970s despite a slow decline in its 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 6 to 8, 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

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13 We ignore the logical possibility that age-retardation at younger ages could be counter-balanced by double-promotion at older ages.
elementary school. Among children aged 6 to 8 from 1982 to 1992, age-grade retardation has reached 25 to 30 percent by ages 9 to 11.

Social Differences in Retention

While there are similarities in the age pattern of grade retardation among major population groups—boys and girls and majority and minority groups—there are also substantial differences in rates of grade retardation among them, many of which develop well after school entry. The gender differential gradually increases with age from 5 percentage points at ages 6 to 8 to 10 percentage points at ages 15 to 17. 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 2 and 3 show trends in the development of age-grade retardation by race/ethnicity in each of two age groups: 6 to 8 years old and 15 to 17 years old. Here, unlike the case of gender differentiation, the rates of age-grade retardation are very similar among Whites, Blacks, and Hispanics at ages 6 to 8. However, by ages 9 to 11, the percentages enrolled below modal grade levels are typically 5 to 10 percentage points higher among Blacks or Hispanics than among Whites. The differentials continue to grow with age, and at ages 15 to 17, 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 ages 15 to 17, there is a differential between Hispanics and Blacks, favoring the latter, and this appears to follow from high rates of early school dropout among Hispanics. There is almost no difference in the dropout rates between
Whites and Blacks, but Hispanics are much more likely to leave school at an early age. 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 9, and it persists and grows through the end of secondary schooling. This growth can only be explained by grade-retention. By age 9, there are sharp social differentials in age-grade retardation, favoring Whites and girls relative to Blacks or Hispanics and boys. By ages 15 to 17, close to 50 percent of Black males have fallen behind in school—30 percentage points more than at ages 6 to 8—but age-grade retardation has never exceeded 30 percent among White girls of the same age. If these rates and differentials in age-grade retardation are characteristic of a schooling regime in which social promotion is perceived to be the norm, it is cautionary to imagine what we might observe when that norm has been eliminated.

**RACE-ETHNICITY, SOCIAL BACKGROUND, AND AGE-GRADE RETARDATION**

We have carried out logistic regression analyses enrollment below modal grade level vs. enrollment at or above modal grade level. At age 15, the modal grade (in October) is the

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14 Dropout by ages 15 to 17 does not indicate ultimate rates of failure to complete high school because large numbers of youth complete regular schooling through age 19 or, alternatively, pass the GED exam through their late 20s (Hauser 1997).

15 Again, the tiny fraction of students who have dropped out of school by age 15 are classified as below the modal grade level.
sophomore year of high school. Overall, from 1974 to 1990, 26 percent of 15 year-old youth were enrolled below the 10th grade or were not currently enrolled in school. Figure 4 shows predicted proportions of males enrolled below the 10th grade for each year by race-ethnicity (White, African-American, Hispanic, or Other). The estimates are based on a model in which there are no interactions between gender and race-ethnicity or between those two variables and calendar year, so the estimates for males parallel those for females, and trends are the same within each race-ethnic group. These simplifying assumptions do not substantially distort the trends.

Minority students are far more likely than White students to fall below the 10th grade at age 15. The odds are 2.09 times larger for African-Americans than for Whites; they are 2.35 times larger for Hispanics than for Whites; and they are 1.49 times larger for persons of other (mainly Asian) race-ethnicity than for Whites. These different odds of age-grade retardation translate into percentages below grade level of 25.5 percent among Whites, 41.2 percent among African-Americans, 44.0 percent among Hispanics, and 33.6 percent among Others. The race-ethnic effects dwarf year-to-year differences in age-grade retardation. However, the effect of gender is comparable to that of race-ethnicity. The odds that a 15 year-old male will fall below the 10th grade are 67 percent higher than the odds that a 15 year old female falls below the 10th grade. Thus, the predicted percentage of Black males below modal grade in 1989 is 48.1 percent, but the predicted percentage of Black females below modal grade in the same year is only 35.7 percent.

The Black-White differential in age-grade retardation, but not the differential between Whites and other minority groups, is partly explained by geographic location. African Americans live disproportionately in the South and in the central cities of major metropolitan areas, and age-grade retardation is greater in those areas than in other regions or in other metropolitan or non-metropolitan locations.
Metropolitan status adds six categories to the model, each shown with the percentage of 15-year-olds living in the area: central city in major metropolitan area (9.1%), suburb in major metropolitan area (13.1%), other central city (12.7%), other suburb (20.6%), identifiable areas outside metropolitan areas (30.2%), and geographic areas whose metropolitan status is not identifiable in the CPS (14.4%). Variables were also added for the four Census regions: East (21.9%), Midwest (26.0%), South (30.9%), and West (21.1%).

There are large geographic variations in age-grade retardation. The odds of falling below grade level are 0.57 times as large in the suburbs of major metropolitan areas as in their central cities, 0.88 times as large in the central city of a smaller metropolitan area than in a major central city, 0.75 times as large in a suburb of a smaller metropolitan area than in a major central city, and 0.92 times as large in a non-metropolitan area as in a major central city. There is little difference in age-grade retardation between the East and Midwest regions—only about a 5 percent difference in the odds. However, the odds of falling below modal grade level are 1.37 times greater in the South than in the East, and they are 0.82 times less in the West than in the East. Note that each of these effects comes from a model in which race-ethnicity, gender, and year have been controlled; they do not reflect differences in race-ethnic composition of the population across geographic areas.

When the geographic variables are added to the model of race-ethnicity, gender, and year, the odds—relative to Whites—that African-American youths fall below modal grade-level decline from 2.09 to 1.75. At the same time, the odds of age-grade retardation increase slightly for Hispanics (from 2.35 to 2.42) and for Others (from 1.49 to 1.67). That is, the geographic location
of African-Americans is unfavorable to their timely progress through primary and secondary school, and this partly explains their disproportionate age-grade retardation.\textsuperscript{16}

We next add a set of social, economic, and family background characteristics to the model. In addition to variables already mentioned, these include the log of family income, a dummy variable for home ownership, years of K-12 schooling of the householder and spouse, years of post-secondary schooling of the householder and spouse, socioeconomic status of the occupation of the householder and spouse, and a dummy variable for broken family (living with only one parent), as well as dummy variables for missing family income and missing head’s occupation.

The addition of these variables substantially reduces race-ethnic differentials in age-grade retardation. Estimated coefficients of this model are shown in Table 1. The odds of falling below modal grade level–relative to Whites–decline to 1.05 for African-Americans, 1.09 for Hispanics, and 1.14 for Others. In fact, none of these comparisons is statistically significant at even the 0.05 level.\textsuperscript{17}

Why do the race-ethnic differentials disappear? Minority group youth are disadvantaged on each of the social and economic background characteristics included in the model of Table 1, and those variables have large effects on the chances of falling below the model grade level by age 15. Since family income is expressed in logs, while the dependent variable is the log of the odds-ratio, the effect of family income can be described as an elasticity: Each 1 percent increase in

\textsuperscript{16} Of course, this leaves open the possibility that states and localities with larger shares of African-Americans deliberately choose more restrictive promotion policies that apply to all students.

\textsuperscript{17} In these preliminary analyses, we have not corrected for departures of the CPS from simple random sampling. Thus, the findings reported in Table 1 tend to overstate the statistical significance of coefficients. There is even less here than meets the eye.
family income leads to a 0.18 percent decline in the odds of falling below modal grade level. Home ownership (rather than residing in rental housing) reduces the odds of falling below modal grade level by 33 percent. This variable would appear to be a proxy, both for family wealth and for residential stability, and its effects are impressively large. An additional year of parental K-12 schooling reduces the odds of falling below grade level by about 8 percent, while an additional year of parental post-secondary schooling reduces the odds by 2.5 to 4.5 percent; the effect of spouse’s education is less than that of the householder. Finally, after controlling all other variables in the model, the odds of falling below grade level increase by 21 percent if the youth lives in a one-parent household.

One other finding in Table 1 is especially noteworthy, namely, the rapid increase in the odds of age-grade retardation from the mid-1970s to 1990. In 1989 and 1990, the odds of falling below the modal grade level were more than 1.5 times as large as in 1974, and there was especially rapid growth in age-grade retardation after 1980. By way of illustration, Figure 5 shows trends in predicted percentages of 15 year-olds below the 10th grade, based on the model of Table 1. The percentages are normed to refer to White males in large central cities in the East with average family background characteristics, but under the model the estimated trends are the same for all geographic and social groups. Because social background characteristics were gradually improving in American families across this period – primarily because of increasing parental education (Hauser and Phang 1993) – the directly observable trend in age-grade retardation understates the net increase. For example, in Figure 4, the percentage of Whites below grade level increases from 26 percent to 31 percent between 1974 and 1990, but in the background-adjusted series of Figure 5, the percentage of Whites below modal grade level increases from 25 percent to 34 percent. In terms of the odds of falling behind, the observed
growth in the odds is 28 percent, and after adjustment for social background, the growth is 53 percent. In brief, far from slipping toward a norm of social promotion, American schools accelerated cumulative rates of age-grade retardation from the mid-1970s to 1990.

The CPS sample is large enough to permit estimation of the effects of residence in specific large states and metropolitan areas. For example, Figure 6 shows model-based estimates of the percentage below the 10th grade at age 15 in 17 major metropolitan areas, in the remaining metropolitan areas, and in non-metropolitan areas. The estimates pertain to White males of average social background, based on a model that controls social background, race-ethnicity, gender, year, and regional location. Within major metropolitan areas, the estimates are shown separately for central cities and suburbs, but the series is ordered from highest to lowest using the rates in central cities. Houston, Texas, tops the list with 60 percent of 15 year olds below the 10th grade, both in central city and suburbs, along with Cleveland’s central city. At the other extreme, Newark and Minneapolis have fewer than 30 percent below the modal grade at age 15. It is notable that, excepting Cleveland, the six cities with the highest rates of age-grade retardation are in all in the South, while the eleven cities with the lowest rates of age-grade retardation are all outside the South.

Figure 7 gives estimates of differentials in age-grade retardation for states and groups of states that are separately identifiable in the October CPS data. The estimates pertain to White males of average social background, based on a model that controls social background, race-ethnicity, gender, year, and metropolitan status. Several groups of states are not separately identifiable throughout the period covered by the October CPS data.\textsuperscript{18} There is less variation in

\textsuperscript{18} The state groups are Pacific Northwest (Washington, Oregon, Alaska, Hawaii), Mountain (Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada), New England
rates among states than among metropolitan areas, but the differences are still large. For example, the rate for Texas is 50%, while that for Illinois is 29%. As one might expect, southern states—and the District of Columbia—typically have high rates of age-grade retardation, while states in the northeast, upper midwest, and west have the lowest rates. However, there are notable exceptions; Ohio and Indiana each have relatively high rates of age-grade retardation.

These preliminary analyses are limited in several ways. Obviously, they ignore children who are greater or less than 15 years old. Furthermore, they fail to consider differences in the effects of race-ethnicity by gender, metropolitan status, or year. We plan to take up these possibilities in greater detail with data for additional years and age levels.

With or without these details, one main finding is strong and clear: During the period from 1974 to 1990, social background, along with geographic location, accounted for almost all of the large race-ethnic differentials in age-grade retardation at age 15. Although the odds of falling behind are about twice as great in minority groups as among Whites, the race-ethnic differentials are small when social background and geographic location have been controlled. It would be overly simple to say that class, rather than race was the dominant factor affecting rates of progress through elementary and early secondary school. It would better to say that a broader set of social and economic background variables, not including race-ethnicity per se, were responsible for observable race-ethnic differentials in age-grade retardation.

RACE-ETHNICITY, SES, AND TEST-BASED PROMOTION

(Massachusetts, Maine, New Hampshire, Vermont, Rhode Island), South Atlantic (South Carolina, North Carolina, Georgia), Upper Midwest (Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, Nebraska), Mid-Atlantic (Delaware, Maryland, Virginia, West Virginia), West South Central (Arkansas, Louisiana, Oklahoma), Mid-South (Kentucky, Tennessee), and Deep South (Alabama, Mississippi).
There are good reasons to wonder whether the same relationships among race-ethnicity, social background, and age-grade retardation have persisted through the 1990s, or whether they may change amidst the current movement toward test-based decision-making in elementary and secondary schooling. There are already strong relationships between race-ethnicity, socioeconomic status (SES), and the use of tests for promotion and retention, and these may become yet stronger. A recent national longitudinal study, using the NELS database, shows that certain students are far likelier than others to be subject to promotion tests in the 8th grade (Reardon 1996:4-5):

[S]tudents in urban schools, in schools with high concentrations of low-income and minority students, and schools in southern and western states, are considerably more likely to have [high-stakes] test requirements in eighth grade. Among eighth graders, 35 percent of black students and 27 percent of Hispanic students are subject to [a high-stakes test in at least one subject] to advance to ninth grade, compared to 15 percent of white students. Similarly, 25 percent of students in the lowest SES quartile, but only 14 percent of those in the top quartile, are subject to eighth grade [high-stakes test] requirements.

Moreover, the study found that the presence of high-stakes 8th grade tests is associated with sharply higher dropout rates, especially for students at schools serving mainly low-SES students. For such students, dropping out of school early—between the 8th and 10th grades—was 6 to 8 percent more likely than for students from schools that were similar excepting the high-stakes test requirement (Reardon 1996).
What does it mean that minority students and low-SES students are more likely to be subject to high-stakes tests in the 8th grade? Perhaps, as Reardon points out, such policies are “related to the prevalence of low-achieving students—the group proponents believe the tests are most likely to help.” Perhaps the adoption of high-stakes test policies for individuals serves the larger social purpose of ensuring that promotion from 8th to 9th grades reflects acquisition of certain knowledge and skills. Such tests may also motivate less able students and teachers to work harder or to focus their attention on the knowledge domains that test developers value most highly. But if retention in grade is not, on balance, beneficial for students, as the research suggests (Shepard and Smith 1989), it is cause for concern that low-SES children and minority students are disproportionately subject to any negative consequences.

Those who leave school without diplomas have diminished life chances. High dropout rates carry many social costs. It may thus be problematic if high-stakes tests lead individual students who would not otherwise have done so to drop out. There may also be legal implications if it appears that the public is prepared to adopt high-stakes test programs chiefly when their consequences will be felt disproportionately by minority students and low-SES students.

New York City appears to be following a similar cycle of strict and loose retention policies, in which the unsuccessful Promotional Gates program of the 1980s was at first “promising,” then “withered,” and was finally canceled by 1990, only to be revived in 1998 by a new central administration (Steinberg 1998a, Steinberg 1998b). This cycle of policies, combining strict retention criteria with a weak commitment to remedial instruction, is likely to reconfirm past evidence that retention in grade is typically harmful to students.

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19 For a discussion of possible claims of discrimination based on race or national origin, see National Research Council (1998 Chapter 3).
Another important question is whether the use of a test in making promotion decisions exacerbates existing inequalities or creates new ones. For example, in their case study of a school district that decided to use tests as a way to raise standards, Ellwein and Glass (Ellwein and Glass 1989) found that test information was used selectively in making promotion and retention decisions, leading to what was perceived as negative consequences for certain groups of students.\textsuperscript{20} Thus, although minorities accounted for 59 percent of the students who failed the 1985 kindergarten test, they made up 69 percent of the students who were retained and received transition services. A similar pattern was observed at grade 2.

In addition, there may be problems with using a test as the \textit{sole} measure of the effectiveness of retention or other interventions (summer school, tutoring, and so on). This concern is related to the fact that the validity of test and retest scores depends in part on whether the scores reflect students' familiarity with actual test items or a particular test format. For example, there is some evidence to indicate that improved scores on one test may not actually carry over when a new test of the same knowledge and skills is introduced (Koretz, et al. 1991, House 1998).

The current reform and test-based accountability systems of the Chicago Public Schools provide an example of high-stakes test use for individual students that raises serious questions about “teaching to the test.” Although Chicago is developing its own standards-based, course-specific assessment system, it presently remains committed to using the Iowa Test of Basic Skills as the yardstick for student and school accountability. Teachers are given detailed manuals on preparing their students for the tests (Chicago Public Schools 1996a, Chicago Public Schools

\textsuperscript{20} Ellwein and Glass (1989) assumed that the intervention, i.e. retention, was not as beneficial as promotion to the next grade level.
Student test scores have increased substantially, both during the intensive summer remedial sessions—the Summer Bridge program—and between the 1996-1997 and 1997-1998 school years (Chicago Public Schools 1997b, Chicago Public Schools 1998b), but the available data provide no means of distinguishing true increases in student learning from statistical artifacts or invalid comparisons. Such gains would be expected from the combined effects of teaching to the test, repeated use of a similar test, and, in the case of the Summer Bridge program, the initial selection of students with low scores on the test. UNFORTUNATELY, THE EVALUATION OF CHICAGO’S POLICIES, NOW UNDERWAY AT THE CHICAGO CONSORTIUM ON SCHOOL RESEARCH (1999), HAS FAILED TO PROVIDE AN INDEPENDENT CRITERION OF THEIR EFFECTIVENESS.

21 In the Chicago Public Schools, each retest is based on an alternative form of the Iowa Test of Basic Skills.
References


Ecology, Department of Sociology, University of Wisconsin-Madison.


October.


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Figure 1
Percentage of Children Enrolled Below Modal Grade for Age by Age Group and Year in which Cohort was 6 to 8 Years Old

Source: U.S. Bureau of the Census, Historical Statistics, Table A-3, persons 6 to 17 years old.
Dropouts are included in the series at ages 15 to 17.
Figure 3
Percentage Enrolled Below Modal Grade or Dropping Out by Ages 15 to 17
By Year Cohort Reached Ages 6 to 8 by Race-Ethnicity

Figure 4
Percentage Enrolled Below Modal Grade or Dropping Out: 15 Year-Old Males by Race-Ethnicity

Source: Model-based estimates from Uniform October CPS Files.
Figure 5
Trends in Age-Grade Retardation Net of Geography and Social Background: 15 Year-Old Males by Race-Ethnicity

Source: Model-based estimates from Uniform October CPS files. See text for explanation.
Figure 6
Predicted Percentage Below Modal Grade Level at Age 15: Selected Metropolitan Areas by City/Suburban Status in 1990

Source: Model-based estimates from the Uniform CPS file. See text for explanation.
Source: Model-based estimates from the Uniform CPS file. See text for explanation.