

# ACADEMIC BEHAVIORS AMONG HIGH-ACHIEVING AFRICAN-AMERICAN STUDENTS

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**Research on nationally representative samples** that investigates group differences in achievement consistently documents lower scores for African-American than for White students. Although these African-American and White achievement differences have diminished over the last decade, they remain substantial (Ekstrom, Goertz, & Rock, 1988; National Assessment of Educational Progress [NAEP], 1985).

This article examines reading achievement levels of African-American students from a novel perspective. First, the focus of this article is on high-achieving African-American students—a nationally representative sample who score above the national average in reading achievement. The family backgrounds, school characteristics, and academically related behaviors of these students are contrasted with those characteristics of the remainder of the African-American population (i.e., those who score below the national average in reading achievement).

Second, the article investigates achievement in the middle grades (eighth grade), whereas most achievement studies concentrate on either elementary- or high-school students. Because very few students have dropped out of school at that point, this investigation does not suffer from the potential selection bias that differential drop-out rates introduce to comparisons in achievement later in high school.

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EDUCATION AND URBAN SOCIETY, Vol. 24 No. 1, November 1991 65-86

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How do high-achieving African-American eighth-graders compare with their lower-achieving counterparts? By directing attention to students who are successful in educational terms and by comparing the characteristics by which they resemble and differ from the low-achieving group, we approach the question of race differences in academic achievement from a more positive vantage point than is typical of research in this area.

## BACKGROUND

The most common explanation for the low academic achievement for students from racial/ethnic groups has emphasized the environmental and cultural deficiencies these children bring to school. However, this "cultural-deficit" model for explaining race differences in achievement is of very limited utility. Zinn (1987), for example, presents evidence showing that "poverty and family structure among racial-ethnics continue to be created more by economic conditions external to the family than by race-specific cultural patterns" (p. 3). This is a view also shared by Wilson (1987).

Attempts to explain the low academic achievement of racial/ethnic students by emphasizing the detrimental effect of environmental deficiencies, genetic inheritance, and cognitive socialization have been criticized on methodological grounds as well. Overall, many researchers view individual differences over commonalities, a blindness to cultural differences, a denial of children's ability to learn on their own, and overly simple constructs for school success and knowledge as inappropriate models for explaining race differences (e.g., Ginsburg, 1972, 1986).

A more useful stream of research has more explicitly considered the effect of racial/ethnic status on achievement as a social-psychological phenomenon. The low social status of African-Americans in the American social and cultural stratification system goes further in explaining school performance than do genetic, environmental, or cultural factors. Denial of access to desirable jobs, job ceilings, and the cultural bias of "White" intelligence tests have contributed to the lower achievement scores of African-American youth (e.g., Ogbu, 1986).

In addition to limitations placed on their achievement, African-American students face a triple cultural bind, according to this stream of research. They belong simultaneously to three groups: the mainstream, the African-rooted Black culture, and a status-oppressed racial/ethnic group. Each group membership carries with it requisite identities, expectations, and values. Not only are there problems associated with biculturalism, but the frames of reference

for Euro-American and Black African cultures are diametrically opposite. Not surprisingly, this situation is thought to influence academic performance through higher levels of stress, less effective study time, and reduced academic recall ability (Boykin, 1986; Gougis, 1986).

Attributing the cause of lower racial/ethnic performance on achievement tests primarily to factors external to the direct educational processes (i.e., outside the purview of schools) is interpreted by some as relieving of responsibility that segment of society charged with fostering academic achievement in America's young people (Edmonds, 1979; Neisser, 1986). This accusation is driven, in part, by the existence of research that indicates significant relationships between school-level variables and achievement (Coleman, Hoffer, & Kilgore, 1982; Greeley, 1982; Jones, 1984; Keith & Page, 1985; Lee & Bryk, 1988, 1989; Rutter, Maughan, Mortimore, Ouston, & Smith, 1979; Stauffer & Hinzman, 1980).

Investigating differential treatment for racial/ethnic students is not new. It is rooted in the 1954 Supreme Court decision regarding desegregation and can be traced back even further. More recently, however, the focus has shifted to differential treatment within schools in an attempt to identify school-level variables that may be manipulated to improve racial/ethnic student achievement (see Epstein, 1988).

Among the most common variables tested are the number of courses within a particular content area, teacher-student interactions, the quantity and quality of instruction, staff expectations, disciplinary environment, school climate, and school-tracking orientation. Although the relative influence of these and other variables differs among studies and data sets, in general, school factors have been identified as significant predictors of achievement differences (Ascik, 1984; Coleman et al., 1982; DeBord, Griffin, & Clark, 1977; Felsenthal, 1983; Jones, 1984; Lee & Bryk, 1988, 1989; Neisser, 1986; Scott-Jones & Clark, 1986; Welch, Anderson, & Harris, 1982; Winfield, 1990).

## ACHIEVEMENT DIFFERENCES

*Achievement differences over time.* Several studies investigating achievement trends for similar cohorts over time have concluded that racial/ethnic students in general, and African-Americans in particular, have made more gains than Whites have (Applebee, Langer, & Mullis, 1986; Burton & Jones, 1982; DeBord et al., 1977; Ekstrom et al., 1988; Kennedy, Birman, & Demaline, 1986; Koretz, 1987; NAEP, 1985). In a comparison of the achieve-

ment levels of high-school seniors in 1972 and 1980, Ekstrom, Goertz, and Rock (1986), using large nationally representative samples from NLS-72 (National Longitudinal Study of 1972) and HS&B (High School and Beyond), concluded that student scores generally declined in vocabulary, reading, and math achievement. A primary reason for the decline was demographic—the increased proportion of low-income non-White students in the high-school population. The greatest declines, however, were found for White students. Comparing separate racial/ethnic subgroups, the actual declines were less for both Hispanics and African-Americans than for Whites. A substantial decline in the academic orientation of students, that is, in school-related behaviors such as homework and academic course enrollment, was the second major contributor to the test score decline over this period (Ekstrom et al., 1986).

An ongoing national assessment of reading proficiency among students in 4th, 8th, and 11th grades notes the same trend (NAEP, 1985). This study, however, found small overall achievement gains in reading from 1971 to 1984, rather than the achievement declines noted in the NLS-72/HS&B study by Ekstrom et al. (1986), and the gains from 1971 to 1984 for both Hispanic and African-American students were greater (particularly for African-Americans).

Another national assessment study examined the impact of Title I money on the improvement of schools (NAEP, 1981). Although Title I (now Chapter 1) schools do not enroll African-American students exclusively, minorities are overrepresented in poorer school districts where Chapter 1 funds are invested. The study found that from 1970 to 1980 the mean reading score gap between Chapter 1 and non-Chapter 1 schools diminished. This indication of a general trend in differential achievement gains for racial/ethnic students suggests that social programs, such as subsidizing poorer school districts, do influence achievement to some degree. Similar effects of compensatory education programs in closing the racial/ethnic gap were found in a study examining trends in academic achievement sponsored by the Congressional Budget Office (Koretz, 1987) and in a recent reevaluation of Chapter 1 (Kennedy et al., 1986).

Focusing on African-American achievement differences, and using both NAEP data for the three age groups and Scholastic Aptitude Test (SAT) data for high-school students who took that test, Jones (1984) reports a consistent decline in score differences on both verbal and math tests over the last two decades. The SAT results are particularly noteworthy, because during this period there was a consistent increase in the proportion of African-American students taking these tests.

Although Jones suggested that social and educational programs initiated in this period (school desegregation and specific programs for the disadvantaged) could possibly account for the narrowing gap, he was unable to confirm this directly. Instead, he concludes that ethnic group differences in high-school math achievement, and the reduction of those differences in recent years, is more likely to be attributable to trends toward fewer differences between African-American and White students in mathematics course enrollments. Jones suggests that a likely explanation for the narrowing gap between African-American and White student achievement is related to the direct schooling processes for these two groups.

Jones's (1984) conclusion is supported by research that has shown increased math achievement scores for females who have taken more math courses. Furthermore, the connection between academic background and achievement makes intuitive sense. The content of schooling and the accessibility to academic pursuits for groups previously underrepresented should have an impact on test scores measuring achievement in these areas. If not, one might reasonably question the value of schooling altogether (Pallas & Alexander, 1983; Scott-Jones & Clark, 1986).

*Achievement differences by age and content areas.* In examining the development of differences between African-American and White student achievement, researchers suggest that early school experiences establish a "trajectory" of achievement that is perpetuated into later grades (Alexander & Entwisle, 1988). Ginsburg and Russell (1980) found no differences by either race or socioeconomic status (SES) group in mathematics achievement prior to entering kindergarten. Alexander and Entwisle (1988) found similar results among urban first-graders for both mathematics and reading achievement. By the end of the first grade, however, performance differences by race had emerged, which increased by the end of second grade. Their research highlights the role of teacher expectations and grades given in the first-grade classroom, both of which correlate highly with test differences at the start of second grade.

Dreeben and Gamoran (1986), who also examined achievement in first grade, suggest that apparent racial differences in learning to read reflect differences in the configuration of classroom resources and, in particular, a student's access to resources. They suggest that both African-American and White first-graders learn to read in response to the same set of influences, but that these influences may not be equitably distributed. They concluded that "when instructional differences correspond to race, racial differences in

learning get produced" (p. 668). That is, the primary sources of racial differences in early school learning emerge within the school.

Although consistently documenting the existence of achievement differences between African-American and White students, research has not yet defined the specific variations in resources by grade and over content areas. Studies using large national assessment data and longitudinal nationally representative data, such as NAEP and HS&B, have shown this variability (Burton & Jones, 1982; Greeley, 1982; Jones, 1984; Keith & Page, 1985; NAEP, 1985).

A close analysis of reading proficiency among students at 4th, 8th, and 11th grades (NAEP, 1985) shows variation in reading achievement differences between African-American and White students over these grade levels. Despite the generally minimal gains from 1971 to 1984 for Whites at all three levels, 9-year-old Whites demonstrated higher gains than did the other two age groups. Greater gains were demonstrated by African-American students across all age groups, with the highest increase for 17-year-olds. The most dramatic changes occurred among African-American 17-year-olds (1980-1984) and 9-year-olds (1971-1975).

Using NAEP data from the 1970s, Burton and Jones (1982) reported a consistent decline over time in the achievement gap between White and African-American students across different curricular areas (writing, science, mathematics, social studies, and reading) for ages 9 and 13. Between 1970 and 1980, the closing of the gap was most dramatic in reading for 9-year-olds and in writing for 13-year-olds. Writing and mathematics were the most difficult content areas for 9- and 13-year-olds. The least decrease in the race differential occurred in science. Although Burton and Jones suggested that these results may have been influenced by programs designed to foster educational opportunity, the relationship remains controversial and empirically not demonstrated.

Although race differences in achievement emerge early in the course of schooling, they appear to increase as students go through school. The relative difficulty of mathematics for African-American 13-year-olds increased for African-American 17-year-olds. Using data from a special NAEP mathematics assessment adjusted statistically for the disproportionate drop-out rates of 17-year-olds, Jones (1984) found that although 13-year-old African-Americans gave 17% fewer correct answers than 13-year-old Whites did, the difference grew to 25% by age 17. High-school achievement differences are also verified in HS&B data. Although overall achievement scores improved from sophomore to senior years, race differences increased (Coleman et al., 1982; Ekstrom et al., 1988; Lee & Bryk, 1988).

## INFLUENCES ON ACHIEVEMENT

*Individual attitudes and behaviors.* Attitudes toward school and time devoted to academic-related tasks are important for achievement. Brookover and Schneider (1975), in an analysis of fifth-grade attitudes, discovered that students' sense of futility in the school social system accounted for nearly 45% of the remaining variance in student achievement after race, SES, and community were controlled.

Despite a strong correlation between the sense of futility and background variables, the size of this relationship suggests that students' understanding of the role they play in school determines, to some extent, how well they perform. White, Karlin, and Burke (1986) found that values learned from parents were the best predictors of reading skill for sixth-graders. Similarly, Walberg and Tsai (1984, 1985) found that reading attitude had a significant positive influence on performance.

African-American students' attitudes toward success in school may be more strongly related to achievement than those of White students (Hall, Howe, Merkel, & Lederman, 1986). In a study of African-American and Hispanic fourth- and sixth-graders from inner-city public schools, Waxman (1986) found African-American students' estimates of their teachers' instructional time strongly related to feedback and reading gains. These estimates probably reflected both individuals' attitudes toward classroom instruction and instructional quality.

Trotter (1981) found differences in attitudes toward school and perception of peers' attitudes between high- and low-achieving African-American males. There were also differences on such academically related issues as the importance of good grades, the importance of study, doing homework, and cooperating with teachers. Trotter concluded that peer reference groups exert a negative influence on academic learning for African-American males (see also Clark, 1991 [this issue]).

Time devoted to academically related tasks is also an important behavioral element. The two most common measures of academic time are hours spent on homework and watching television, with the two usually (understandably) inversely related. Although African-American students tend to watch more television, they do not appear to spend less time on homework. This factor differs by gender and age, with Black females reporting increasing amounts of academic behaviors across Grades 4, 8, and 11 and decreasing amounts of TV viewing over these grades as compared to African-American males (Winfield & Lee, 1986). Although the effect of television watching on

achievement diminishes, it is time spent away from academic pursuits (Coleman et al., 1982; Greeley, 1982; Walberg & Tsai, 1984, 1985).

*Family educational resources.* In addition to background factors that measure a family's financial situation, social status, and race, some researchers have investigated the influence of other family resources—particularly those related to educational activities. These resources are items common in most homes (e.g., magazines, newspapers, books, typewriters) and parental involvement in the child's development (awareness of and reward for intellectual attainment, use of English at home, and involvement with school). These factors, which may vary from family to family and from community to community, influence student achievement (Greeley, 1982; Shea & Hanes, 1977; Walberg & Tsai, 1984, 1985).

*School organization.* Variation in achievement between schools has led researchers to investigate characteristics of schools, in addition to family SES, individual behaviors, and family resources, that influence racial/ethnic achievement. In a review of the literature, Bryk, Lee, and Smith (1990) found that school organization had profound effects on student outcomes, particularly for minorities. Lee and Bryk (1989) found several school factors to be associated with socially equitable outcomes (smaller size, a constrained curriculum, and fairness in discipline). They found that a safe and orderly school climate is associated with more equitable mathematics achievement between racial/ethnic and White students. Newman, Rutter, and Smith (1989) argued that similar factors (e.g., small size, student integration into school life) reduce alienation and promote engagement in high schools, factors that are in turn associated with achievement.

"Effective schools" research has emphasized school-level variables that educators can manipulate. Despite the apparent lack of consistency in results and methodological weaknesses (e.g., small samples and limited correlational outcomes), this research has an intuitive appeal. It seems appropriate that schools have an influence on student development (Mackenzie, 1983; Purkey & Smith, 1983; Rowan, Bossert, & Dwyer, 1983). To say this is not to deny the limitations of specific studies; rather, it recognizes that, in fact, some schools are better than others irrespective of their clientele. Researchers are curious to find out what makes schools "better" in this way. They seek to identify educationally related factors that encourage achievement in economically disadvantaged students in racial/ethnic groups, rather than relying solely on socioeconomic and family factors.



Although this body of research has not agreed on the salient factors for school effectiveness, several common themes have emerged. Effective schools, usually identified in terms of above-average student achievement scores (frequently for disadvantaged students), have strong instructional leadership from the principal, closely monitor student progress, have high expectations for students, establish clear goals, and have an orderly environment (Clark, Lotto, & McCarthy, 1980; Edmonds, 1979; Felsenthal, 1983; Hallinger & Murphy, 1986; Purkey & Smith, 1983; Venezky & Winfield, 1979). Studies outside the effective schools genre have identified similar elements affecting student achievement. These studies document a shift from emphasizing resources (per pupil expenditures, library resources, and buildings) to studying the effects of change in processes (classroom interaction, academic demands, and school social systems) that have occurred over the past two decades in school-effects research.

More generally, Rutter et al. (1979) applied the concept of ethos to schools as the culture within which individuals function and processes operate. This organizational phenomenon is the basis of Purkey and Smith's (1983) theory of school improvement, which includes elements of content (e.g., structure, roles, norms, values) and process (political and social relationships, information flow). Subsumed within this construct is the notion of teachers' beliefs (Winfield, 1986), expectations, and attitudes toward students from racial/ethnic groups. Although these factors (often called school climate) are fuzzy to define and difficult to measure and manipulate, the image and representation of the school with these analyses are more complete. Personal and family factors, factors that are part of school life — peer relationships, quality of instruction, social environment — and the interrelationships among them provide a (albeit unparsimonious) prediction model (Coleman et al., 1982; Lee & Bryk, 1989; Mackenzie, 1983; Parkerson, Lomax, Schiller, & Walberg, 1984; Purkey & Smith, 1983; Rowan et al., 1983; Rutter et al., 1979; Tomlinson, 1981).

*Catholic school effect on racial/ethnic achievement.* Several studies use HS&B data from 1980 to 1982 to investigate comparative achievement levels of African-American and White students in Catholic and public secondary schools (Bryk, Holland, Lee, & Carriedo, 1984; Coleman et al., 1982; Greeley, 1982; Hoffer, Greeley, & Coleman, 1985; Keith & Page, 1985; Lee & Bryk, 1988, 1989). In general, these studies have concluded that the difference between the achievement of White and African-American students is smaller in Catholic than in public schools. Although the fact that different

types of students attend these two types of schools creates some difficulty in separating selection factors from achievement differences, the findings hold up in the multivariate analyses with substantial statistical controls for selectivity bias.

Other studies have investigated the same phenomenon with 1985-1986 NAEP data in mathematics, in science (Lee & Stewart, 1989), and in reading (Marks & Lee, 1989), and with 1983-1984 NAEP reading data (Lee, 1986). The findings were consistent. In terms of academic proficiency African-Americans and Whites attending Catholic school were considerably closer to one another than to corresponding subjects in public schools across the three grade and age levels assessed by NAEP. Although these latter analyses did not adjust for possible selection factors that might account for the results, the consistency of findings suggest that school factors contribute substantially to reducing the gap.

An analytical approach relatively free of the selection issue examines the gain in achievement for the same groups of African-American and White students from their sophomore to their senior years in high school. This is a considerably stronger method of analysis than the cross-sectional studies described earlier in this article (Lee, 1986; Lee & Stewart, 1989; Marks & Lee, 1989; NAEP, 1985; Rock, Ekstrom, Goertz, Hilton, & Pollack, 1984), because those comparisons were not made on the same students over time. Longitudinal gain-score analyses have found that racial/ethnic students in Catholic schools gain more than Whites in all six achievement areas measured by HS&B (Bryk et al., 1984; Hoffer et al., 1985). In fact, Jencks (1985, p. 134) concluded that "the evidence that Catholic schools are especially helpful for initially disadvantaged students is quite suggestive." For Jencks, "disadvantaged" includes racial/ethnic status and SES.

## THE STUDY

### THE RESEARCH QUESTION

We address the phenomenon of African-American achievement differences from an inclusive perspective, exploring individual, family, and school factors that influence achievement. Although on the average, African-American students score lower than White students on achievement tests, considerable numbers of African-American students are high achievers. This achievement influences self-efficacy and self-concept, which in turn promote resilience among youth. We centered our investigation on this group of

students, a focus that has been unrepresented in the considerable body of research on race differences in achievement.

We also focused our efforts on identifying those factors specifically related to the schools in which high-achieving African-American students are likely to be found and on identifying specific academically related behaviors that these students are likely to exhibit.

## METHOD

*Sample and data.* Data come from the National Assessment for Educational Progress (NAEP) 1983-1984 reading assessment (NAEP, 1986). That year NAEP assessed three age and grade groups (4th grade/9 years old, 8th grade/13 years old, and 11th grade/17 years old) of over 20,000 students each.

We decided to use the eighth-grade sample for several reasons. First, most of the recent race/ethnicity studies of academic achievement have focused on high-school students, primarily because of the availability of HS&B. An investigation of achievement before students reach high school reduces the influence of more differentiated learning experiences (e.g., tracking and ability grouping—see Gamoran, 1987). Second, the bias due to the greater likelihood of African-Americans dropping out of school prior to the end of high school is avoided (Coleman et al., 1982; Rock, Ekstrom, Goertz, & Pollack, 1985). Third, available research on school achievement in the middle grades is limited, compared to either elementary or secondary levels. Fourth, the fourth-grade NAEP data file has considerably more missing data on important family background measures (specifically parent education) than the eighth-grade file. The reliability of other background measures for a self-report student survey of 9-year-olds is also limited.

*Target group.* The study focuses on high-achieving African-American eighth-graders defined as those students who score above the population mean on reading proficiency. Because the population is largely (74.0%) White, the population mean is close to the White mean of 266.7. However, because the mean reading proficiency for African-Americans (240.7) is below the White mean, the proportion of African-Americans classified as high achieving is considerably less than one half (26%) of the African-American sample (661 of a total African-American sample of 2,555).

*Comparison group.* The sample of high-achieving African-Americans is compared to the rest of the African-American sample, that is, those African-

American eighth-graders<sup>1</sup> whose reading-proficiency level is below the overall population mean ( $n = 1,894$ ). Specific comparisons focus on differences in family background, in the types of schools each of these two groups of African-American students attend, and in their academic behaviors in those schools.

#### DIFFERENCES BETWEEN HIGH- AND LOW-ACHIEVING AFRICAN-AMERICANS

The characteristics of the high-achieving African-Americans that are shown in Table 1, fall into four categories.

*Background differences.* The families of high-achieving African-American students are of a considerably higher social class than those of the lower-achieving African-Americans. The high-achieving group is about one-half a year younger than below-average African-Americans, who also exhibit more variability in age. The latter group contains a substantial proportion of over-age students.

Both groups of African-American students are more likely to reside in urban areas. In fact, almost one half of both groups (45% and 46%) come from urban areas. High-achieving African-American students are, however, somewhat less likely to come from rural areas.

High-achieving African-American students report a higher proportion of working mothers (75%) compared to the 70% reported by below-average achievers.

*School differences.* There are more similarities than differences among the schools that African-American students of both groups attend. This is particularly striking in comparing the proportions of racial/ethnic students and faculty in these schools. Racial/ethnic students compose 48% and 53% (above-average achiever) of the enrollment of the schools these two groups of students attend, and the proportion of racial/ethnic faculty is also high (33% and 40%, respectively).

The average SES of schools that high-achieving African-American students attend, however, is generally higher than the SES of schools that their lower-achieving counterparts attend, a pattern also evident for student commitment. Schools that high-achieving African-American students attend also offer an enriched curriculum more often than the schools that low-achieving students attend. The proportion of students (18%) in remedial reading in the

TABLE 1  
**Group Means for High-Achieving Versus  
 Below-Average-Achieving African-American Eighth-Graders**

	<i>Blacks Achieving Below Average</i>	<i>Blacks Achieving Above Average</i>
Sample size	1,894	661
Student/family background		
Social class	-.97 (1.9) <sup>a</sup>	-.22 (1.6)
% female	50 (0.50)	56 (0.49)
Age in months	169 (9.8)	164 (6.7)
% whose mothers work	70 (0.46)	75 (0.43)
% urban	46 (0.50)	45 (0.50)
% rural	32 (0.46)	26 (0.44)
School characteristics		
School size	752 (434)	740 (460)
Students/faculty	19.9 (5.5)	20.6 (5.9)
School SES	-1.39 (1.9)	-.83 (1.8)
% minority enrollment	53 (0.34)	48 (0.33)
% minority faculty	40 (0.29)	33 (0.28)
Disciplinary problem	.37 (1.1)	.23 (1.1)
Student commitment	-.52 (0.95)	-.30 (0.98)
Curriculum exposure	.18 (1.0)	-.06 (1.0)
% remedial reading	23 (0.22)	18 (0.17)
% in Catholic school	5 (0.22)	10 (0.30)
Student academic behaviors		
Pages read/week	9.62 (7.3)	10.19 (6.7)
Homework, hours/day	0.83 (0.79)	0.98 (0.81)
Television, hours/day	4.27 (1.9)	4.03 (1.8)
Positive use of time factor	-.29 (1.0)	-.10 (1.0)
Grades (GPA)	2.57 (0.79)	2.94 (0.77)
Reading score	226.0 (25)	279.7 (15)

a. Numbers in parentheses represent the standard deviation of the mean score for each group.

schools that high-achieving African-Americans attend tends to be somewhat lower than in the schools of their lower-achieving counterparts (23%).

Certain school measures—size and student:faculty ratio—show little difference between groups. But high-achieving African-Americans are twice as likely as below-average African-Americans to attend Catholic school (10% vs. 5%).

*Academic behavioral differences.* Both groups of African-American students watch an average of 4 hours of television per day. However, high-

achieving African-Americans report reading more pages in school and for homework, and the high-achieving students get considerably better grades. The high-achieving African-American students also report doing more homework than their counterparts.

*Achievement differences.* Given the criterion for selecting these groups, it is not surprising that the reading-proficiency level of high-achieving African-Americans is closer to the population mean. Nevertheless, the high-achieving students still score more than two standard deviations above the low-achieving African-American group, a very large difference.

In sum, African-Americans whose scores are above average resemble their lower-scoring counterparts in family and school social conditions (lower school SES, more likely to have working mothers, higher school racial/ethnic enrollment and faculty). However, the schools that the high achievers attend had a more positive environment and higher student commitment. Moreover, this group's academic behaviors are markedly different from their below-average African-American counterparts (more homework done, higher grades, a more positive use of their time, and a higher probability of attending Catholic school).

In all analyses, we interpret the NAEP reading-proficiency measure as a proxy for student achievement or ability. Although NAEP tests are designed to be more curriculum specific than standardized achievement tests, it is also clear that NAEP is measuring ability in reading in some sense, because a single set of items is presented to a national sample of American students (who do not follow a common curriculum). We acknowledge rather loose use of the terms *high ability* and *low ability*, which actually indicate student scores above or below the mean on a specific measure of reading proficiency.

#### ACHIEVEMENT AND CATHOLIC SCHOOL ATTENDANCE

Table 2 presents the effects of above- or below-average reading proficiency of African-Americans on students' likelihood of Catholic school attendance, use of time, and grade point average.

High-ability African-Americans are more likely to attend Catholic schools (10% vs. 5%). Residential location is strongly related to this choice, with African-American students from either urban or rural areas much more likely to attend Catholic schools than the contrast group, suburban location. Although family social class is unrelated to Catholic school attendance for African-American students, the Catholic schools that African-American

**TABLE 2**  
**Effect of Above- or Below-Average Reading Proficiency on the Likelihood of Catholic School Attendance, Positive Use of Time, and GPA**

<i>Independent Variables</i>	<i>Dependent Variables</i>		
	<i>Catholic School Attendance</i>	<i>Positive Use of Time</i>	<i>Grade Point Average</i>
Reading proficiency (above average)	-.00	.06***	.15***
Student/family background			
Social class	.01	.13***	.12***
Female	.02	.06**	.09***
Age	-.01	.02	-.17***
Mother working	.01	.02	.01
Urban	.41***	.02	-.09***
Rural	.26***	.02	-.07*
School characteristics			
School social class	.43***	-.04	.22***
% minority faculty	.16***	.04	-.08**
Disciplinary problem	-.23***	-.02	.07**
Student commitment	.00	-.02	.04
Curriculum exposure	.07***	.04	.07***
% remedial reading	-.06	-.03	.09***
Catholic school	—	.05*	.16***
Student academic behaviors			
Pages read	.00	—	—
Homework, hours/day	.00	—	—
Television, hours/day	.02	—	—
Grade point average	.14***	—	—
% variance explained ( $R^2$ )	29.2	3.6	13.9

NOTE: For African-American eighth-graders, standardized regression coefficients (betas). \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

students attend are likely to have a student body of a higher average social class and to have more faculty from racial/ethnic groups on staff. Moreover, the Catholic schools that African-American eighth-graders attend have fewer disciplinary problems. These schools also present a more enriched curriculum and have fewer students in remedial reading. African-American eighth-graders who earn high grades are more likely to be in Catholic than in public schools.

### POSITIVE USE OF TIME

African-American students of higher achievement use their time more positively (more reading, more homework, less television). African-Americans of higher SES, especially females, also use their time positively. The only school factor related to positive time use, once background and proficiency levels are controlled, is Catholic school attendance. That is, African-American students in Catholic schools use their time more positively. This model explains only a small proportion (4%) of the variance in this dependent measure for African-American eighth-graders, however.

### GRADES

Not surprisingly, high-achieving African-American eighth-graders get higher grades. Demographic characteristics are strongly associated with earning higher grades: social class, gender (female), and age (i.e., younger students get better grades). As both urban and rural location are negatively related to higher grades, we may conclude that African-American students attending schools in suburban areas get better grades.

Several school characteristics are associated with higher grades for African-American students, including attending a higher-SES school and a school where there are fewer faculty from racial/ethnic groups. African-American students in Catholic schools get significantly higher grades, as do those exposed to a more enriched curriculum. Curiously, African-American students in schools with more disciplinary problems and with more students in remedial reading get higher grades. This may suggest that within these schools there are higher standards and more emphasis placed on meeting these standards.

### ADJUSTED ACHIEVEMENT EFFECT

Our findings that the schooling processes that foster high achievement and resilience in African-American students are important, above and beyond demographic factors, lead us to conclude that the fact that the schools they attend are somewhat more likely to be Catholic schools makes little difference. That such schools possess the climate and programs that induce high achievement in African-American students is what counts. The relative affluence of the African-American students who attend Catholic schools makes some difference (i.e., these schools do charge tuition), but the characteristics of the schools themselves are also major factors "explaining" high



**TABLE 3**  
**Catholic School Attendance, Positive Use of Time, and GPA for High-Low Reading-Proficiency Dummy Variable**

<i>Adjustment Steps<sup>a</sup></i>	<i>Dependent Variables</i>		
	<i>Catholic School Attendance</i>	<i>Positive Use of Time</i>	<i>Grade Point Average</i>
Unadjusted	.079**	.085**	.214**
Student/family background	.046*	.063*	.156**
School characteristics	.019	.064*	.154**
Student academic behaviors	-.004	—	—

NOTE: For African-American eighth-graders, standardized regression coefficients (betas).

a. The variables included in these adjustment steps are exactly those listed as independent variables under each grouping category in Table 2. The beta coefficient for reading proficiency in the last step is the same as that shown in Table 2 for that variable.

\* $p < .01$ ; \*\* $p < .001$ .

achievement in African-American students. These results are shown in Table 3.

High-achieving students use their time more positively. However, controlling for demographic, programmatic, and climate differences among schools (including Catholic school attendance) does not completely explain why high-achieving African-American students both get better grades and appear to use their school-related time more positively.

## DISCUSSION

Variations in students' background, academic behaviors, and the schools they attend are less successful in helping us understand the reading-proficiency disadvantage between high-achieving African-American and White students than they are in explaining differences in the academic behaviors (Catholic school attendance, positive use of time, and grades) between below- and above-average-achieving African-American students. This suggests that additional mediating variables (e.g., the opportunity structure offered these children) are needed in models explaining African-American achievement (see Wilson-Sadberry, Winfield, & Royster, 1991 [this issue]). The results from this study indicate, nevertheless, that the characteristics of the schools that students attend, as well as the individual actions of students in those schools that relate to their academic performance, make substantive contributions to explaining achievement differences between high- and low-achieving African-American eighth-grade students.

High-achieving African-American students are similar to low-achieving African-American students in several respects. Although they come from families that are somewhat more advantaged, their families' social class level is substantially below the population average. Most African-American students, regardless of achievement levels, are relatively poor and have working mothers.

African-American students are much more likely to live in urban areas. The schools that African-American students attend, regardless of achievement level, are similar. The average SES of the schools reflects the SES levels of the students, which is generally low. More noteworthy is the fact that African-American students of all achievement levels are very likely to attend schools where at least one half of the students (and over one third of the faculty) are members of racial/ethnic groups.

High-achieving African-American students are not those (few) who attend mostly White suburban schools, or even urban schools that are integrated (also few). Rather, their schools look remarkably like those attended by the large majority of African-American students—located in cities, with many disadvantaged and racial/ethnic students, with relatively more discipline problems and less student commitment. An exception is that higher-achieving African-American students are twice as likely to attend Catholic school, but neither group attended Catholic schools in large numbers (at least, not in 1983-1984). Of course, more Catholic schools are also located in urban areas.

These students differ considerably from their lower-achieving African-American counterparts in how they react to this school environment. They read considerably more, do more homework, watch slightly less television—that is, they generally make more positive use of their time. Such behavior appears to pay off in producing higher achievement as well as higher grades.

Despite the relatively less advantaged schools that high-achieving African-American students attend, characteristics of the academic and normative environments of schools have a definite effect on student performance (especially on grades). A more disciplined environment; exposure to an enriched curriculum that includes frequent classes in science, art, and music; and a rigorous program of remediation in reading foster better school performance among African-American students.

Although such factors were also shown here to predict Catholic school attendance for African-American eighth-graders, once those factors were taken into account, the likelihood of attending Catholic schools for African-American students was no longer an explanation for higher achievement by students. We interpret this finding as suggesting that African-American

students attend Catholic schools primarily for their more academically rigorous programs.

It is our conclusion that process variables connected with schooling rather than family background explain important differences in student academic behaviors, magnify differences in achievement, and account for differences in the academic behaviors among African-American students who are high and low achievers. Moreover, these processes facilitate resilience among students by increasing self-efficacy as well as opening up opportunities for future successes in school.

## NOTE

1. Additional analyses were conducted between racial/ethnic groups. However, achievement differences between groups were not as successfully explained in models that compared African-American and White students as those that compared African-American students of different achievement levels. Details of these analyses are available from the first author.

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