
Schooling Behaviors or Prior Skills? A Cautionary Tale of Omitted Variable Bias Within Oppositional Culture Theory

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Prior research on oppositional culture theory has generally focused on beliefs about the opportunity structure, or the “acting white” hypothesis, as an explanation for racial differences in school achievement. However, little attention has been given to the mechanism by which these beliefs affect achievement: schooling behaviors. The authors posit that students’ prior level of skills may be an important omitted factor that biases the effect of schooling behaviors on achievement. Using data from the National Educational Longitudinal Survey, they found that whereas behaviors account for a larger proportion of Asian Americans’ achievement advantage than do prior skills, prior skills explain half to nearly three-quarters of blacks’ low achievement relative to that of whites and that dramatic declines in behavioral effects on achievement are observed after prior skills are controlled. Finally, the findings show that schooling behaviors are partially shaped by prior skills. They suggest that students with low skill levels prior to high school are likely to have poor achievement at the end of their high school careers, regardless of their schooling behaviors during high school.

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Explaining racial differences in achievement continues to remain important to researchers, educators, and policy makers. One explanation for variation in achievement among minority groups during adolescence that has garnered much attention is Ogbu’s (1978) oppositional culture theory (or resistance model). The theory posits that racial differences in school achievement occur because Asian Americans adopt pro-schooling behaviors and blacks adopt an oppositional culture that is characterized by counterproductive schooling behaviors (e.g., being disruptive in class, not doing homework) relative to whites (Fordham and Ogbu 1986). Thus, most studies on oppositional culture theory have focused on causes of

racial differences in schooling behaviors—differences in perceptions about the opportunity structure. The behavioral response to these beliefs that has received the most attention is the “acting white” hypothesis, which proposes that good school performance is denigrated and labeled as acting white (see, e.g., Carter 1999, 2005; Cook and Ludwig 1997; Downey and Ainsworth-Darnell 2002; Farkas, Lleras, and Maczuga 2002; Fordham and Ogbu 1986; Tyson, Darity, and Castellino 2005).

Scholars who have assessed the resistance model have been more apt to use high school samples to evaluate racial variations in schooling orientation (e.g., Ainsworth-Darnell and Downey 1998; Fordham and Ogbu 1986;

MacLeod 1987; Mickelson 1990; Steinberg, Dornbusch, and Brown 1992). This is to be expected, since the resistance model was developed with reference to high school students. However, the primary focus on high school samples highlights a potentially major weakness of the literature on the resistance model: the lack of research on whether oppositional behaviors during high school are exogenous.

Learning and achievement are longitudinal and complex processes; one cannot jump to the high school period and examine gaps in achievement and their immediate correlates and obtain the answers to inequality because achievement is a cumulative process. Research by Tyson (2002) indicated that achievement plays a central role in the development of academic behaviors early in the schooling process. To the extent that oppositional behaviors are endogenous to prior academic skills, the failure to account for prior skills could lead to overestimation of the effects of behaviors. Thus, oppositional culture as a theory cannot adequately explain racial differences in achievement if it is not adapted to account for how achievement and behaviors are intertwined over the course of a student's educational trajectory (from elementary school through high school). Few studies on this topic have assessed students' academic culture from a longitudinal perspective or have shown how omitting prior skills can lead to erroneous conclusions. Therefore, the extent to which students' in-school behavioral responses to beliefs about the system of social mobility explain racial differences in achievement or even predict achievement once prior skills are controlled remains unclear.

The purpose of this study was to assess a key assumption of the resistance model—that schooling behaviors explain racial differences in achievement. First, we examined whether oppositional schooling behaviors in high school explain a greater proportion of racial differences in 12th-grade achievement than do students' academic skills prior to high school. Second, we assessed the extent to which schooling behaviors remain important for predicting future achievement after students' prior skills are accounted for.

Accounting for pre-high school skills seems important for a theory in which the behavior-achievement link during high school is a key component. Finally, we determined whether prior skills are a determinant of schooling behaviors during high school. Thus, in contrast to previous studies, which have often focused on beliefs about the opportunity structure and the system of social mobility, or the acting white hypothesis, we focused on the result of these beliefs—measures intended to capture the degree to which students engage in oppositional schooling behaviors.

In the following section, we provide a brief description of the oppositional culture theory's explanation for group differences in schooling behaviors. We next discuss the centrality of beliefs about the opportunity structure and the acting white hypothesis in previous research. Then, we discuss the problem of omitted variable bias in assessing the behavior-achievement link and our analytic plan for addressing this concern. We conclude by discussing the implications of the findings for oppositional culture theory. Specifically, we discuss whether the theory needs to be revised to account for learning and achievement as a dynamic and cumulative process that unfolds over time.

OPPOSITIONAL CULTURE THEORY

Ogbu's (1978) oppositional culture theory claims that some minorities adopt counterproductive schooling behaviors because of their knowledge or belief that the system of social mobility in the United States has been rooted in educational and occupational discrimination based on race. An important component of the theory for understanding why groups differ in schooling behaviors is minority classifications: autonomous, voluntary or immigrant and involuntary (Ogbu and Simons 1998).

Although they experience some discrimination, autonomous minorities (such as Amish, Jews, and Mormons)—which may be small in number and different in race/ethnicity, religion, or language from the dominant

group (white Americans)—are not dominated or oppressed, and their achievement is similar to the dominant group (Ogbu 1978, 1990). Voluntary minorities are groups who willingly moved to the United States seeking better opportunities (for employment or greater political or religious freedom). Since they view education as the primary mechanism for achieving opportunities that led them to come to the United States, they typically do not adopt counterproductive schooling behaviors. In contrast, involuntary minorities are groups who have been historically enslaved, colonized, or conquered and interpret their groups' incorporation into the United States as having been forced by white Americans. Relative to other groups, involuntary minorities experience greater and more persistent forms of discrimination, which leads them to perceive barriers to success with regard to future employment and earnings. Hence, they become disillusioned about the future and doubt the value of schooling; for quite rational reasons, involuntary minorities put forth less effort in and commitment to schoolwork, which leads to their lower school achievement than that of whites.

Ogbu's group classifications explain why ethnic minority groups differ on schooling

behaviors and, subsequently, school achievement. Therefore, the aim of oppositional culture theory is to explain racial differences in school achievement via racial differences in school disengagement. Figure 1 presents a simplistic view of oppositional culture theory for the purpose of illustration. Figure 1a shows the bivariate effect of race on achievement in which the lower-case "a" represents the total effect. Since Asian Americans, blacks, and whites have been used to represent the voluntary, involuntary, and dominant groups, respectively, within Ogbu's group classification system (see Ainsworth-Darnell and Downey 1998), we use race as a proxy for group classification. In Figure 1b, three significant relationships—represented by the fact that lower-case "a," "b," and "c" are not equal to zero—illustrate this total effect as decomposed into two components: (1) the direct effect of race on achievement (path a) and (2) the indirect effect of race on achievement operating through schooling behaviors (paths b and c). Thus, the resistance model has two major assumptions, represented by racial differences in schooling behaviors (path b) and the impact of behaviors on achievement (path c). As we discuss later, the former assumption has received more attention than the latter assumption.

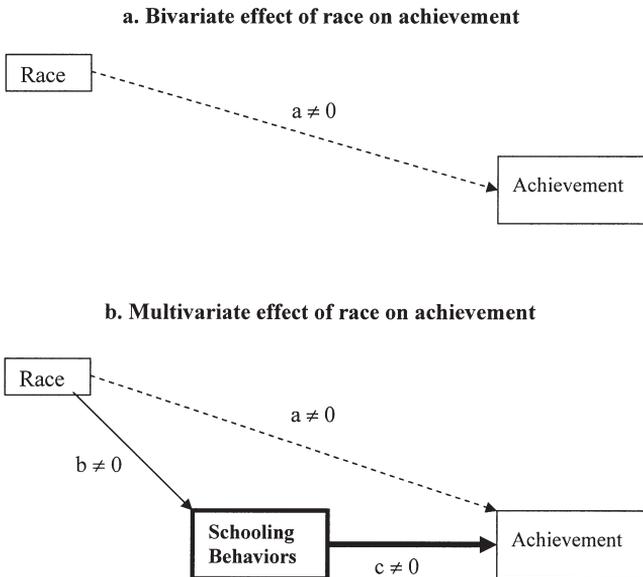


Figure 1. Illustration of Oppositional Culture Theory

PREVIOUS RESEARCH

Centrality of Beliefs and the Acting White Hypothesis

The resistance model makes a compelling link between society and the individual to explain racial differences in school outcomes. The theory's major premise—that the prevailing system of social mobility greatly determines achievement motivation and behavior largely through students' beliefs about the opportunity structure—has been a major focus of previous studies. Ogbu (1978) noted that Americans are motivated to maximize school achievement because of the belief that more education leads to better jobs, higher wages, and social status. Survey-based inquiries have supported the notion that societal conditions affect individuals' achievement via perceptions about the opportunity structure (Ford and Harris 1996; Mickelson 1990). These studies have found that students who express a belief in the achievement ideology (that education leads to status attainment) experience academic success, while those who challenge this belief do not. However, previous research on racial differences in perceptions about the opportunity structure has been mixed; while some studies have found that blacks perceive fewer returns to education than do whites (Fordham and Ogbu 1986; Mickelson 1990; Ogbu 2003), others have found that blacks believe in the achievement ideology (Ainsworth-Darnell and Downey 1998; Harris 2006; O'Conner 1999).

Another line of research in the resistance model is whether blacks equate academic success with acting white. Fordham and Ogbu (1986) and Ogbu (2003) provided evidence that school resistance manifests as a fear of acting white among blacks. In contrast, recent studies have shown that blacks do not experience a greater social cost for high achievement than do whites; they have suggested that blacks' peer groups are not monolithic and allow space to affirm academic identity (e.g., Akom 2003; Carter 2005; Cook and Ludwig 1997; Harris 2006; Horvat and Lewis 2003; O'Conner 1999; Tyson et al. 2005). These studies highlight the emphasis on beliefs and the acting white hypothesis in

the literature on the resistance model. However, there has been a dearth of research on the effect of a key mediator of the influence of beliefs: schooling behaviors (path c in Figure 1b).

In one of the few studies to operationalize school resistance, Ainsworth-Darnell and Downey (1998) examined whether racial differences in oppositional schooling behaviors exist. Using data from the National Education Longitudinal Study (NELS), they found that relative to the dominant group (whites), voluntary minorities (Asian Americans) have more productive schooling behaviors (that is, they exert more effort in school, spend more time on homework, get in trouble less, and are less disruptive) and involuntary minorities (African Americans) have less productive school behaviors. They also found that these behaviors are related to achievement in the expected manner and partially account for racial differences in achievement. However, our concern with previous studies is that the hypothesized and estimated effects of oppositional schooling behaviors might have been overestimated because of the omission of students' skill level prior to the theory's applicability (about Grade 7 or 8 when youths begin to learn about or understand the opportunity structure). Furthermore, the use of a cross-sectional design and focus on beliefs about the opportunity structure and the sanctioning of peers for good achievement as the primary behavioral mechanism has resulted in the failure to examine the second major assumption of the resistance model, which is indicated by path c in Figure 1b (the behavior-achievement link).

Omitted Variable Bias

Oppositional culture theory is often tested using high school samples because these students are expected to have a more developed understanding of the opportunities that are available within the system of social mobility for members of their minority group (e.g., Ainsworth-Darnell and Downey 1998; Carter 1999; Cook and Ludwig 1997; Fordham and Ogbu 1986; Mickelson 1990; Ogbu 2003). We contend that the problematic feature of the resistance model's theoretical frame-

work—and studies that have tested key tenets of the theory—is that the effect of oppositional schooling behaviors on school achievement may actually reflect students' cognitive skills prior to entering high school. Although group comparisons of beliefs about the opportunity structure during high school assess a key component of the theory, it is important to account for students' levels of academic skill prior to high school for two reasons.

First, in a study of two all-black elementary schools, Tyson (2002) found that schooling experiences—particularly early achievement outcomes—play a central role in developing schooling behaviors. She noted that “children’s negative statements about school reflected a desire to avoid further experiences of failure” (p. 1184). Tyson’s research raised the important question of whether negative schooling behaviors among some adolescents reflect the masking of other feelings, such as fear, hurt, or embarrassment, resulting from poor school achievement. Narratives of children in Tyson’s study provided evidence of the onset of this process. Similar conclusions were reached by Frisby and Tucker (1993), who found a strong positive relationship between students’ academic competence and engagement in school.

Second, prior work on achievement has shown that students begin to sort into cognitive trajectories as early as the first grade

(Entwisle and Alexander 1992; Fryer and Levitt 2004). Farkas and his colleagues (Farkas 1993, 1996; Farkas et al. 1990) found that most students who read below grade level by the end of the 3rd grade read so far below grade level by middle and high school that they have difficulty with the curriculum. This finding likely reflects that the acquisition of reading and math skills is a cumulative process. Furthermore, using data from NELS, Phillips (1998) found that achievement scores between the 8th and 12th grades are strongly correlated ($r = .90$ in both reading and math). Correlations of this magnitude suggest that students who perform well on cognitive tests at a given point in their academic careers are likely to do well at a later time in their careers. Therefore, conceiving of achievement as partially a function of a latent individual trajectory may help explain strong correlations between scores measured at multiple times for the same individual.

Figure 2 illustrates our conceptual model. We are interested in testing the second major assumption (path c) after accounting for students’ prior levels of skills. The bold arrows in the figure represent the paths of interest in this study. We posit that students’ skill level prior to high school may be an important omitted factor that explains a greater proportion of the racial gap in achievement and reduces the effect of schooling behaviors on 12th-grade achievement. Figure 2 illustrates that behaviors

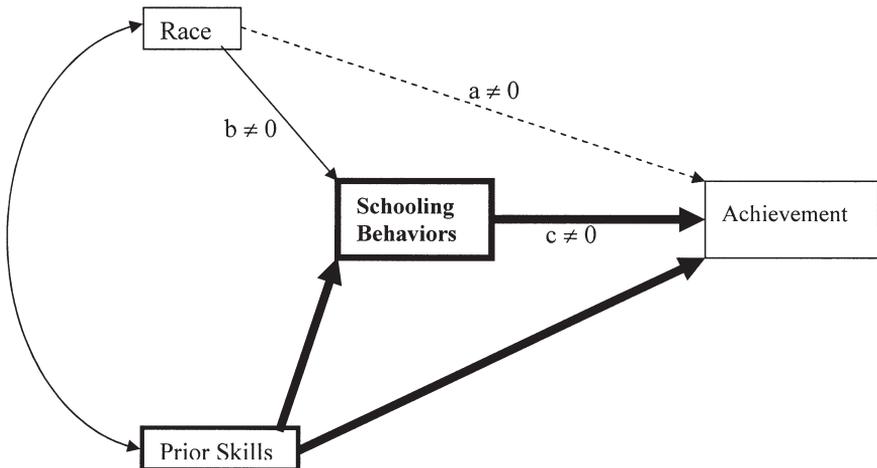


Figure 2. Illustration of the Omitted Variable Bias Within Oppositional Culture Theory

during high school are endogenous to skill levels prior to high school. Thus, we expect that a large proportion of the behavioral effects on school achievement reflect the academic skills that students have upon entering high school and that prior academic skills are correlated with race.

To illustrate how the omission of a variable can lead to biased findings, consider the following general example in which the “true” model for school achievement (Y) for the i th child at time t is determined by the child’s schooling behaviors (X_1), prior skill level (Z_{it-1}), and an error term (ϵ), such that

$$Y_{it} = \beta_0 + \beta_1 X_{1i} + \beta_2 Z_{it-1} + \epsilon \quad (1)$$

$$Z_{it-1} = \alpha_0 + \alpha_x X_{1i} + u_2, \quad (2)$$

where Z_{it-1} (prior skills) is a function of a set of factors (e.g., parental academic involvement during childhood and the quality of the child’s educational experience) that occurred at an earlier time. Substituting Equation 2 into Equation 1 leads to Equation 3 whereby

$$Y_{it} = \beta_0 + \beta_1 X_{1i} + \beta_2 [\alpha_0 + \alpha_x X_{1i} + u_2] + \epsilon. \quad (3)$$

Rearranging the factors in Equation 3 yields Equation 4 and gives

$$Y_{it} = [\beta_0 + \beta_2 \alpha_0] + [\beta_1 + \beta_2 \alpha_x] X_{1i} + [\beta_2 u + \epsilon]. \quad (4)$$

Thus, by omitting skill level (Z_{it-1}) from Equation 1, the estimated coefficient for the vector of behaviors (X_1) would be $[\beta_1 + \beta_2 \alpha_x]$ (for the purpose of clarity, we do not show a coefficient for socioeconomic background factors that may affect achievement). In the present analysis, we determine the extent to which the effects that students’ schooling behaviors during high school have on their academic achievement toward the end of their high school careers are overestimated.

METHOD

Data

Data for this study were drawn from NELS, a nationally representative data set collected by

the National Center for Education Statistics (NCES) that contains five waves of data collection from 1988 to 2000. We used the first three waves of the data set in which the students were in Grades 8 (1988), 10 (1990), and 12 (1992). Our sample consisted of 5,950 whites, 764 blacks, and 597 Asian Americans ($N = 7,311$) because these groups best represent the dominant, involuntary, and voluntary groups in the United States that are discussed in oppositional culture theory.¹ Our analyses are restricted to include only students who were present in the sample from Grade 8 to Grade 12 and who completed standardized math and reading tests developed by the Educational Testing Service (78 percent of both whites and Asian Americans and 73 percent of blacks in NELS—see Appendix Table A1 for an assessment of sample exclusion bias).²

The behavioral measures that we used in this study are either identical or similar to those used by Ainsworth-Darnell and Downey (1998). However, we are interested in a model that predicts students’ achievement at the end of their high school career as a function of their schooling behaviors during high school, controlling for their skill level prior to high school. Therefore, we used 12th-grade achievement as the outcome, 10th-grade behaviors to represent behaviors during high school, and 8th-grade achievement to represent students’ skill level prior to high school because these periods correspond with the first three waves of NELS and best approximate the model. To show the robustness of the findings, we conducted analyses for the two common outcomes that are used to evaluate students’ academic performance: test scores (reading and math) and grades. We also used test scores and grades as measures of prior skills. Test scores and grades may not be uniform in what they measure. For example, prior grades may capture more aspects of previous behavioral issues than do test scores. In addition, using multiple measures of previous academic aptitude will help identify the source of the bias resulting from the omission of prior skills.

Table 1 presents the descriptions of the variables and means for each group. We used six behavioral measures: three counterpro-

ductive (disruptive, being in trouble, and troublemaker) and three productive (time on homework, effort for grades, and attentiveness in class).³ In the table, superscripts are provided next to means that vary by race. Means for the educational outcomes reveal that Asian Americans have the highest achievement level and blacks have the lowest. The next set of means show that Asian Americans score lower on two of the three counterproductive schooling behaviors (blacks score lower on being a troublemaker) and engage in all three productive schooling behaviors more than do the other groups. In contrast, although blacks score lower on two of the three counterproductive schooling behaviors than do whites, they engage in productive schooling behaviors less than do whites and Asian Americans. Specifically, they are more disruptive in class, spend less time on homework, put forth less effort for good grades, and are less attentive in class.

Blacks' relative disadvantage in schooling behaviors, shown in Table 1, is consistent with the resistance model and suggests that these behaviors are potential sources of racial differences in achievement. However, blacks also have lower levels of academic preparation prior to high school than do whites and Asian Americans, which we posit is central to academic success in high school. Therefore, it is unclear whether blacks' lower achievement is more a function of their lower academic skills prior to high school than their schooling behaviors. The extent to which behavioral effects decline once prior skills are controlled would reflect the overestimation of these effects in determining high school achievement. Large declines in behavioral effects would have two major implications for the resistance model. First, they would highlight the need to de-emphasize oppositional behaviors as a mechanism for poor achievement during high school. Second, they would suggest that students' pre-high school skills should be incorporated into explanations of racial differences in achievement that are observed at the end of K–12 schooling. The next sections present the research questions that guided the analyses and discuss our analytic plan.

Research Questions

Question 1: Do schooling behaviors explain a larger proportion of the racial achievement gap than do prior skills?

Question 2: To what extent do the effects of schooling behaviors on achievement during high school decline once pre-high school skills are taken into account?

Question 3: Do students' pre-high school skills affect schooling behaviors during high school?

To address these questions, we first regress students' achievement in Grade 12 on race to establish a baseline for racial differences in achievement. We address Question 1 by introducing schooling behaviors in Model 2 and prior skills in Models 3 and 4 (test scores and grades, respectively) to assess changes in the racial achievement gaps that result by controlling for each vector. In Model 5, we address Question 2 by simultaneously controlling for schooling behaviors and prior skills, which shows the magnitude of the decline in behavioral effects. Finally, we assess Question 3 by estimating the effect of students' 8th-grade skill levels on 10th-grade schooling behaviors. The use of multiple measures for prior skills will show *how* prior achievement is associated with high school behaviors. All analyses control for family income, parental education, family structure, and sex. To account for missing data during the regression analyses, we bottom coded missing cases for the predictors and entered each predictor into the models, along with a "missing information" measure—coded 0 if not missing and 1 if missing. This procedure yields estimates that are identical to those attained via listwise deletion for the variable with the substituted values and allows all cases with values on the outcome to remain in the analysis. We used sample weights to account for clustering, oversamples, and the stratified design of NELS. Since our focus is on the magnitude of decline in behavioral effects after prior skills are controlled, we discuss the findings in terms of percentage declines in the coefficients for both race and the behavioral measures.

Table 1. Means, Standard Deviations, and Descriptions of Variables Used in the Analysis: NELS 1988, 1990, and 1992

Variable Name	Description	Metric	Means (SD)		
			Whites	Asian	Blacks
Educational Outcomes (Grade 12)					
Reading	Item Response Theory (IRT) estimated number right.	10.41 = Minimum score 51.16 = Maximum score	34.76 (9.69)	35.41 ^a (10.21)	28.24 ^{a, b} (9.58)
Mathematics	IRT estimated number right.	16.97 = Minimum score 78.10 = Maximum score	50.74 (13.92)	54.37 ^a (14.12)	39.32 ^{a, b} (12.30)
Grades	Combined grades in reading, math, science, and social studies.	0 to 4.0	2.14 (.82)	2.35 ^a (.72)	1.58 ^{a, b} (.66)
High School Behaviors (Grade 10)					
Disruptive	Teachers' responses to "How often is this student disruptive in class?"	0 = Never 4 = All the time	1.60 (.82)	1.52 ^a (.80)	1.91 ^{a, b} (.99)
In trouble	How many times did the following happen to you in the first half of the current school year? "I got in trouble for not following school rules."	0 = Never to all four items 16 = Ten times or more to all four items	.62 (.91)	.45 ^a (.72)	.60 ^{a, b} (.82)
Troublemaker	"Do you think other students see you as a troublemaker?"	0 = Not at all 2 = Very much	.305 (.53)	.244 ^a (.49)	.208 ^{a, b} (.49)
Homework	"Overall about how much time do you spend on homework each week out of school?"	0 = None 7 = Over 15 hours	2.56 (1.72)	3.17 ^a (1.91)	2.39 ^{a, b} (1.48)
Effort	Teachers' responses to "Does this student usually work hard for good grades?"	0 = No 1 = Yes	.68 (.47)	.75 ^a (.43)	.56 ^{a, b} (.50)
Attentive	Teachers' responses to "How often is this student attentive in class?"	0 = Never 4 = All the time	3.98 (.83)	4.09 ^a (.74)	3.77 ^{a, b} (.83)
Prior Skills (Grade 8)					
Reading	IRT estimated number right.	10.61 = Minimum score 43.83 = Maximum score	28.95 (8.45)	28.40 (9.04)	23.57 ^{a, b} (7.60)
Math	IRT estimated number right.	16.03 = Minimum score 66.81 = Maximum score	38.87 (11.71)	40.72 ^a (12.22)	29.89 ^{a, b} (9.92)
GPA	Cumulative grade point average.	0 to 4.0	3.01 (.75)	3.20 ^a (.70)	2.72 ^{a, b} (.71)

^aDenotes that the mean is significantly different from whites.

^bDenotes that the mean is significantly different from Asian Americans.

RESULTS

Table 2 presents the findings for reading and math achievement. The first model for reading

shows that both Asian Americans and blacks have lower reading scores relative to whites. Thus, background factors explain Asian Americans' reading advantage observed in

Table 2. Unstandardized Coefficients for Test Scores Regressed on Race, High School Behaviors, and Prior Skills

Variables	Reading					Math													
	(1)	(2)	% Δ	(3)	% Δ	(4)	% Δ	(5)	Percentage Decline	(1)	(2)	% Δ	(3)	% Δ	(4)	% Δ	(5)	Percentage Decline	
Race																			
Asian American	-.116*** (.033)	-.655*** (.032)	—	.558*** (.024)	—	.665*** (.031)	—	.307*** (.024)	—	2.353*** (.046)	1.319*** (.042)	44	2.141*** (.028)	9	1.239*** (.039)	47	1.484*** (.027)	37	
Blacks	-4.800*** (.020)	4.177*** (.019)	13	-1.344*** (.015)	72	-3.909*** (.019)	19	-1.391*** (.015)	71	-8.491*** (.028)	-7.356*** (.025)	13	-2.473*** (.018)	71	-6.712*** (.024)	21	-2.560*** (.017)	70	
High School Behaviors																			
Disruptive	—	-1.365*** (.009)	—	—	—	—	—	-4.53*** (.007)	67	—	-2.236*** (.012)	—	—	—	—	—	-836*** (.008)	63	
Introuble	—	-1.132*** (.008)	—	—	—	—	—	-0.06 (.006)	to NS	—	-6.11*** (.011)	—	—	—	—	—	-279*** (.007)	54	
Troublemaker	—	-805*** (.014)	—	—	—	—	—	-403*** (.011)	50	—	-1.038*** (.019)	—	—	—	—	—	-432*** (.012)	58	
Homework	—	.994*** (.004)	—	—	—	—	—	.385*** (.003)	61	—	1.527*** (.005)	—	—	—	—	—	.432*** (.003)	72	
Effort	—	1.189*** (.021)	—	—	—	—	—	.068*** (.016)	94	—	3.005*** (.027)	—	—	—	—	—	.872*** (.018)	71	
Attentive	—	1.567*** (.012)	—	—	—	—	—	.610*** (.009)	61	—	2.341*** (.015)	—	—	—	—	—	.672*** (.010)	71	
Skills Prior to High School																			
Reading	—	—	—	.630*** (.001)	—	—	—	.602*** (.001)	—	—	—	—	.236*** (.001)	—	—	—	.176*** (.001)	—	
Math	—	—	—	.185*** (.001)	—	—	—	.147*** (.001)	—	—	—	—	.810*** (.001)	—	—	—	.698*** (.001)	—	
GPA	—	—	—	—	—	4.737*** (.009)	—	.525*** (.008)	—	—	—	—	—	—	9.442*** (.011)	—	2.619*** (.009)	—	
Constant	21.504*** (.033)	18.825*** (.045)	—	5.907*** (.027)	—	11.241*** (.036)	—	4.998*** (.038)	—	30.319*** (.045)	27.369*** (.059)	—	6.949*** (.031)	—	9.828*** (.045)	—	4.508*** (.042)	—	
R ²	.166	.260	—	.565	—	.280	—	.578	—	.235	.381	—	.708	—	.454	—	.742	—	

Note: Numbers in parentheses are standard errors. All models are net of family income, parents' education, sex, and family structure. The number of observations is 7,311 for both the reading and math models.
 * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed tests).

Table 1 but not blacks' reading disadvantage ($b = -4.800$). The second model shows that behavioral measures affect reading achievement in the expected manner. Specifically, whereas increases in being disruptive, in trouble, and a troublemaker lead to declines in reading scores ($b = -1.362, -.132, \text{ and } -.805$, respectively), reading scores are positively affected by time spent on homework ($b = .994$), effort ($b = 1.189$), and attentiveness ($b = 1.567$). More important, adjusting for high school behaviors leads to a 13 percent decline in the black-white achievement gap. In contrast, Models 3 and 4 show that adjusting for prior skills leads to greater declines in blacks' reading disadvantage relative to whites. Specifically, prior test scores and grades explain 72 percent and 19 percent of the black-white gap, respectively. Furthermore, the findings in Model 5 show that simultaneously controlling for high school behaviors and prior skills leads to declines in behavioral effects ranging from 50 percent to 94 percent (see the fourth highlighted column). The effect of being in trouble becomes nonsignificant.

The next set of models in Table 2 present findings for math achievement. The first two models show that controlling for schooling behaviors leads to a 44 percent reduction in Asian Americans' advantage in math and a 13 percent reduction in blacks' disadvantage in math relative to whites. The next highlighted column shows that controlling for prior test scores leads to less of a reduction in Asian Americans' achievement advantage (9 percent) and a greater reduction in blacks' disadvantage (71 percent) than in the previous model. In contrast, Model 4 shows that controlling for prior grades explains nearly half the Asian American advantage and only 21 percent of the black disadvantage in math achievement relative to whites. Thus, whereas prior test scores are more important for blacks' reading and math achievement, they are less important for Asian Americans' advantage in math than are behaviors and prior grades; prior grades explain the greatest proportion of Asian Americans' advantage in math, followed by high school behaviors. Finally, similar to the findings for reading, controlling for both behaviors and prior skills leads to declines in behavioral effects ranging

from 50 percent to 72 percent (see the final highlighted column in Table 2).

Table 3 repeats the previous analyses for composite grades. The first highlighted column reveals that schooling behaviors account for 45 percent of Asian Americans' achievement advantage and 14 percent of blacks' achievement disadvantage relative to whites. Models 3 and 4 show that while each measure of prior skills accounts for 16 percent of the Asian-white gap, test scores and grades account for 59 percent and 25 percent of the black-white gap, respectively. The final highlighted column shows reductions in behavioral effects ranging from one-third to nearly three-quarters after accounting for prior skills.⁴

In Table 4, we examine whether schooling behaviors are determined by the skills that students acquire prior to high school. The findings show that all the schooling behaviors assessed in this study are affected by prior test scores and grades.⁵ Specifically, increases in achievement lead to declines in the frequency of disruptive behavior, being in trouble, and being recognized as a troublemaker and increases in the time students spend on homework, effort level, and in-class attentiveness. The implications of these results are best understood if they are coupled with those from Tables 2 and 3. Taken together, these results indicate that schooling behaviors are a function of prior skills. In addition, the standardized coefficients (shown in brackets below the unstandardized coefficients) show that with the exception of disruptive behavior, prior grades are more important for high school behaviors than are prior test scores.

DISCUSSION

We began this article by indicating that the link between schooling behaviors and achievement within the oppositional culture model had not been rigorously tested. We claimed that the previous literature on the oppositional culture hypothesis possibly overestimated the effects of schooling behaviors by failing to consider students' skill levels prior to high school. Three important findings emerged from the study. Each finding has

Table 3. Unstandardized Coefficients for Grades Regressed on Race, High School Behaviors, and Prior Skills

Variables	Composite Grade								Percentage Decline
	(1)	(2)	% Δ	(3)	% Δ	(4)	% Δ	(5)	
Race									
Asian Americans	.119*** (.003)	.066*** (.002)	45	.153*** (.002)	16	.070*** (.002)	16	.074*** (.002)	38
Blacks	-.409*** (.002)	-.350*** (.002)	14	-.169*** (.002)	59	-.307*** (.001)	25	-.192*** (.001)	53
High School Behaviors									
Disruptive	—	-.122*** (.001)		—		—		-.069*** (.001)	43
In trouble	—	-.081*** (.001)		—		—		-.056*** (.001)	31
Troublemaker	—	-.065*** (.001)		—		—		-.018*** (.001)	72
Homework	—	.075*** (.000)		—		—		.021*** (.000)	72
Effort	—	.385*** (.002)		—		—		.250*** (.001)	35
Attentive	—	.201*** (.001)		—		—		.124*** (.001)	38
Skills Prior to High School									
Reading	—	—		.015*** (.000)		—		.006*** (.000)	
Math	—	—		.030*** (.000)		—		.015*** (.000)	
GPA	—	—		—		.682*** (.001)		.418*** (.001)	
Constant	.988*** (.003)	.619*** (.004)		-.042*** (.003)		-.525 (.003)		-.673*** (.003)	
R ²	.189	.423		.426		.512		.634	

Note: Numbers in parentheses are standard errors. All models are net of family income, parents' education, sex, and family structure. The number of observations is 6,600.

p* < .05, ** *p* < .01, * *p* < .001 (two-tailed tests).

implications for oppositional culture theory. First, whereas schooling behaviors are more useful than prior skills for explaining Asian Americans' achievement advantage relative to whites, schooling behaviors account for a little more than one-tenth of the black-white achievement gap. Prior skills explain a

greater proportion of the black-white gap than do schooling behaviors. It is interesting that the gap convergence depends on whether prior skills are measured as test scores or grades. Test scores explain nearly three-fourths of the black-white gap in reading and math and more than half the black-

Table 4. Effects of Skills Prior to High School on High School Behaviors

Outcome	Behaviors (Grade 10)					
	Disruptive	In Trouble	Troublemaker	Homework	Effort ^a	Attentive
Prior Skills						
Reading	-.008*** [-.098] (.000)	-.001*** [-.016] (.000)	-.002*** [-.038] (.000)	.008*** [.047] (.000)	.013*** — (.000)	.006*** [.066] (.000)
Math	-.007*** [-.114] (.000)	-.002*** [-.033] (.009)	-.001*** [-.022] (.000)	.016*** [.126] (.000)	.019*** — (.000)	.008*** [.132] (.000)
Grades	-.128*** [-.109] (.001)	-.237*** [-.200] (.001)	-.108*** [-.154] (.001)	.440*** [.192] (.002)	.920*** — (.004)	.296*** [.258] (.001)
Constant	2.669*** (.004)	1.627*** (.004)	.793*** (.002)	-.507*** (.007)	-3.721*** (.014)	2.335*** (.004)
R ²	.105	.092	.071	.132	—	.166

Note: Numbers in brackets are standardized coefficients. Numbers in parentheses are standard errors. Coefficients are net of family income, parents' education, sex, family structure, and race.

^aThe model for Effort shows logistic coefficients. The odds ratios are 1.013, 1.019, and 2.509 for prior reading, math, and grades, respectively. Chi-square = 2051, $df = 16$, $p > .001$.

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed tests).

white gap in grades. In contrast, prior grades account for only one-fifth of the black-white gap in test scores and a quarter of the black-white gap in grades. With regard to the Asian American-white gap in math, test scores account for about one-tenth of the gap, while grades account for nearly half the gap. Thus, it seems that academic preparation prior to high school is more important for blacks' achievement relative to whites.

The second major finding is the significant decline in the effects of schooling behaviors on achievement during high school once prior academic skills are controlled. This finding suggests that while schooling behaviors may affect school achievement, the importance that is attributed to them during high school within oppositional culture theory seems to be overstated. We found that the apparent effects of 10th-grade behaviors on 12th-grade achievement are a function mostly of the particular skill set that students possess when they enter high school. This finding should come as little surprise, given that stu-

dents who experience academic difficulty early in the schooling process are likely to continue to perform poorly in school as they matriculate through the school system (Farkas 1993, 1996; Farkas et al. 1990).

The third major finding is that students' behaviors during high school are endogenous to the academic skills that students acquire prior to high school. This finding suggests that the skills students acquire before they enter high school are an important factor in determining whether students develop oppositional behaviors during high school. Proponents of the resistance model have consistently pointed to oppositional behaviors among black adolescents as the primary reason for their lower school achievement relative to other groups. Our findings suggest that rather than focus solely on oppositional schooling behaviors during high school, researchers should consider pre-high school skills as a source of oppositional behaviors and 12th-grade achievement.

Implications for Oppositional Culture Theory

The strength of the empirical evidence presented in this article warrants a new discussion of the centrality of oppositional behaviors for achievement. Findings by Neal and Johnson (1996), Farkas and Vicknair (1996), and O'Neill (1990) that the black-white wage gap converges when eighth-grade achievement is controlled suggest that middle school is an important checkpoint in youths' development that should receive greater attention among researchers who are interested in racial disparities. Although schooling behaviors during high school are important to some degree (and, as our findings indicate, to a lesser degree than originally thought), researchers who study racial differences in school achievement among adolescents should focus greater attention on academic skills prior to high school.

Thernstrom and Thernstrom (2003) noted that black students are often bewildered by their homework and classroom lessons and often lack the prerequisite skills to complete academic tasks efficiently and thus fall further behind. Similarly, Ogbu's (2003) data suggested that the lack of skills contributes to the lack of effort. After asking students why some blacks did not work hard, Ogbu (2003) recalled a student's response that "some Black students believed that it was cute to be dumb. When pressed for an explanation, she said that it was because they couldn't do well and that they didn't want anyone else to do well" (p. 25). Ogbu (2003) noted that the countereducational attitudes expressed by some black students are not entirely free of self-doubt about their ability to succeed. He described several instances in which black students decided against enrolling in honors and Advanced Placement courses because they were afraid that they would not succeed. However, he did not treat prior skills as a central component of his framework. Therefore, preadolescent academic skills have received far less attention than the current findings suggest they warrant. The accounts given by these scholars do not validate the notion that blacks are reluctant to put forth the effort necessary for good school achievement.

Instead, they suggest that some black students may fail to try at times because they lack the necessary skills.

The findings of our study highlight the usefulness of schooling behaviors for understanding differences in achievement among members of different minority groups. Schooling behaviors are better for explaining why Asian Americans perform well than for why blacks perform poorly relative to whites. Whereas the resistance model seems useful for understanding the academic success of voluntary minorities, our findings suggest that a useful theory for understanding the achievement disadvantages of involuntary minorities should include students' early academic preparation. Resistance model theorists should de-emphasize oppositional behaviors as a mechanism for blacks' relatively poor achievement.

Are Skills in Middle School Endogenous to Prior Behaviors?

Since our focus was on testing an important assumption of oppositional culture theory on middle and high school students, we faced the inevitable limitation of excluding the behaviors and achievement of students before they entered this stage of their lives. Although we partially addressed this concern by estimating the effects of 8th-grade achievement on 10th-grade behaviors, we were unable to assess the consistency of this relationship at earlier stages of students' academic careers. However, given the aforementioned findings of other analyses that students begin to sort into cognitive trajectories as early as the first grade, it seems unlikely that an oppositional culture plays a role in early school achievement. For instance, it is unlikely that racial differences in behaviors and achievement in elementary school (Grades K–5) stem from beliefs about future educational returns. It is difficult to fathom children in kindergarten or elementary school—particularly poor-achieving blacks—resisting school because of projections that they will encounter an unfair opportunity structure as adults. These connections between societal conditions, such as the structure of opportunity and system of social

mobility, and individual-level characteristics, such as race, seem overly sophisticated for poor-achieving young students of any race.

It is more reasonable to expect that racial differences in early academic preparation lead to racial differences in effective educational behaviors and achievement during elementary school. It is possible that young black children perceive and internalize teachers' and peers' lower expectations for their performance; if so, they may feel less capable of succeeding and subsequently put forth less effort toward schooling. Future research should track children's attitudes about the system of social mobility early in the schooling process to determine whether these beliefs in elementary school influence school behaviors, which, in turn, should influence achievement in middle school independent of prior skills.

Our findings suggest that students with low skill levels prior to high school are likely to have poor school achievement at the end of their high school careers regardless of the schooling behaviors they have during high school. If blacks behaved similar to whites and Asian Americans during high school, their achievement would be about 13 percent closer to whites' achievement. However, if students entered high school with similar academic preparation, blacks' achievement would be about 70 percent closer to whites' achievement. The lack of academic success early in the schooling process may lead to poor educational practices prior to adolescence that compromise children's achievement throughout their academic careers.

NOTES

1. Although Ogbu (1978) extended the resistance model to Hispanics, this group was excluded from our study. Ogbu claimed that Mexican Americans—the largest Hispanic group in the United States (U.S. Census Bureau 2000)—feel alienated from American society because of bitter memories of their incorporation into the United States via American imperialistic expansion in the 1840s. However, roughly 50,000 Mexican nationals remained within the newly acquired

U.S. territory, a small fraction of the more than 20 million people of Mexican ancestry who currently live in the United States; most Mexican Americans are immigrants or descendants of immigrants who arrived after the Mexican revolution of 1910 (see Jaffe, Cullen, and Boswell 1980). Although Hispanics are often regarded as the largest oppressed minority group in the United States, the families of almost all Hispanic children in American schools are products of voluntary immigration. Therefore, Ogbu's classification of this group as involuntary minorities seems implausible.

2. Appendix Table A1 serves as a check for attrition bias. The first three columns for each group show means for the independent variables in this study for NELS (the full sample), the study sample (students used in this study), and the excluded sample (students who were present in the first three waves of NELS but who were not used in this study). Differences between the study and full sample—shown in Column 2-1—for whites are negligible (there are no differences for Asian Americans and one for the black sample). Column 3-2 indicates that relative to whites and blacks in this study, those in the excluded sample scored higher on disruptive, in trouble, and troublemaker; scored lower on time spent on homework, effort, and attentive; and had lower test scores (and grades for whites). Therefore, bias that is due to exclusion from the sample is likely to be similar for whites and blacks. The degree of bias is less clear for Asian Americans; the excluded sample fared worse on some measures (troublemaker, effort, attentive, and reading) and better on others (less disruptive, more homework, and greater math achievement). We also show two behaviors for Grade 8. It is interesting that while the excluded sample scored higher on troublemaker than the study sample for all groups, Asian Americans and blacks in the exclude sample engaged in more homework.

3. It is important to note that three of the behavioral measures were reported by teachers: disruptive, effort, and attentive. Numerous studies have found that school personnel place greater emphasis on regulating black children's than other children's

behavior (see, e.g., Delpit 1995; Ferguson 2000; Lewis 2003; Morris 2005; Tyson 2002, 2003). For example, while Ferguson (2000) found that school personnel view the dress and behavior of black boys as recalcitrant and oppositional and exert strict control over them, Morris (2005) found that white and Asian American children are viewed as non-threatening relative to black children. In sum, numerous studies have shown that “schools react to students based on perceptions of race and gender and use these concepts as a basis for specific patterns of regulation” (Morris 2005:28). Therefore, the extent to which blacks have less productive schooling behaviors on the teacher-reported measures may be overestimated. However, to the extent that a bias exists, it has implications only for means across groups; it is reasonable to expect the results for behavioral effects on

achievement—and their level of decline once prior skills are controlled—to remain unaffected.

4. Although the final model for each outcome in Tables 2 and 3 addresses the second research question (i.e., percentage declines in behaviors after controlling for prior skills), Appendix Table A2 shows that percentage declines in behavioral effects are driven by each measure of prior skills.

5. Only two of the six behavioral measures that were used in our analyses were included in NELS for eighth graders. Thus, we could assess the effect of prior skills on behaviors in high school net of prior behaviors only for the models predicting troublemaker and homework. The effects were largely unchanged from the models shown in Table 4 (results available on request).

Table A1. Means and Mean Differences on Behaviors and Prior Skills Among the Full Sample, Study Sample, and Excluded Sample, by Race

	Whites				Asian Americans				Blacks			
	Full Sample (1)	Study Sample (2)	Excluded Sample (3)	Differences Between Samples (2-1)	Full Sample (1)	Study Sample (2)	Excluded Sample (3)	Differences Between Samples (2-1)	Full Sample (1)	Study Sample (2)	Excluded Sample (3)	Differences Between Samples (2-1)
	(1)	(2)	(3)	(2-1)	(1)	(2)	(3)	(2-1)	(1)	(2)	(3)	(2-1)
Behaviors												
Disruptive	1.63	1.60	1.74	-.03	1.50	1.52	1.43	.02	1.92	1.91	1.97	-.01
In Trouble	.66	.62	.79	-.04*	.45	.45	.44	.00	.64	.60	.75	-.04
Troublemaker	.325	.305	.397	-.02*	.271	.244	.389	-.03	.217	.208	.245	-.01
Homework	2.53	2.56	2.40	.03	3.22	3.17	3.43	-.05	2.29	2.39	1.97	.10
Effort	.66	.68	.55	.02*	.74	.75	.66	.01	.53	.56	.43	.03
Attentiveness	3.95	3.98	3.82	.03	4.05	4.09	3.83	.04	3.69	3.77	3.38	.08
Prior Skills												
Reading	28.46	28.95	26.80	.49*	28.28	28.40	27.79	.12	22.73	23.57	20.54	.84*
Math	38.02	38.87	35.18	.85*	40.92	40.72	41.75	-.20	29.37	29.89	28.03	.52
Grades	2.98	3.01	2.86	.03*	3.20	3.20	3.21	.00	2.72	2.72	2.72	.00
Behaviors (Grade 8)												
Troublemaker	.34	.33	.37	-.01	.26	.25	.31	-.01	.20	.17	.27	-.03
Homework	3.16	3.17	3.13	.01	3.27	3.20	3.57	-.07	3.02	3.00	3.09	-.02
N	7,626	5,950	1,676		764	597	167		1,041		764	

Note: Behaviors in Grade 8 are measured identical to their corresponding measures in Grade 10. Item nonresponse for each measure is similar across groups. **p* < .05 (two-tailed tests).

Table A2. Percentage Declines in Race and Behavioral Effects on Reading, Math, and Grades after Controlling for Test Scores (TS) and Grades (G)

Variable (+/-) ^a	Reading: %Δ net of			Math: %Δ net of			Grades: %Δ net of		
	TS	G	TS and G	TS	G	TS and G	TS	G	TS and G
Race									
Asian (+)	—	—	—	26	63	37	12	62	38
Black (-)	71	24	71	70	26	70	55	31	53
Behaviors									
Disruptive (-)	66	14	67	61	18	63	39	25	43
Introuble (-)	72	Pos.	to NS	30	80	54	4	37	31
Troublemaker (-)	46	32	50	45	50	58	26	71	72
Homework (+)	59	29	61	64	39	72	45	56	72
Effort (+)	86	72	94	55	58	71	16	33	35
Attentive (+)	59	26	61	65	36	71	26	28	38

^a Parentheses indicate the direction of baseline effects (Model 1 for race and Model 2 for behaviors in Tables 2 and 3).

REFERENCES

Ainsworth-Darnell, James W., and Douglas B. Downey. 1998. "Assessing the Oppositional Culture Explanation for Racial/Ethnic Differences in School Performance." *American Sociological Review* 63:536–53.

Akom, A. A. 2003. "Reexamining Resistance as Oppositional Behavior: The Nation of Islam and the Creation of a Black Achievement Ideology." *Sociology of Education* 76:305–25.

Carter, Prudence. 1999. "Balancing 'Acts': Issues of Identity and Cultural Resistance in the Social and Educational Behaviors of Minority Youth." Unpublished Ph.D. dissertation, Department of Sociology, Columbia University, New York.

—. 2005. *Keepin' it Real*. Oxford, England: Oxford University Press.

Cook, Philip J., and Jens Ludwig. 1997. "Weighing the 'Burden of Acting White': Are There Race Differences in Attitudes Toward Education?" *Journal of Policy Analysis and Management* 16:256–78.

Delpit, Lisa. 1995. *Other People's Children: Cultural Conflict in the Classroom*. New York: Free Press.

Downey, Douglas B., and James W. Ainsworth-Darnell. 2002. "The Search for Oppositional Culture Among Black Students." *American Sociological Review* 67:156–64.

Entwisle, Doris R., and Karl L. Alexander. 1992. "Summer Setback: Race, Poverty, School Composition, and Mathematics Achievement in the First Two Years of School." *American Sociological Review* 57:72–84.

Farkas, George. 1993. "Structured Tutoring for At Risk Children in the Early Years." *Applied Behavioral Science Review* 1:69–92.

—. 1996. *Human Capital or Cultural Capital? Ethnicity and Poverty Groups in an Urban School District*. New York: Aldine de Gruyter.

Farkas, George, Robert Grobe, Daniel Sheehan, and Yuan Shuan. 1990. "Cultural Resources and School Success: Gender, Ethnicity, and Poverty Groups within an Urban School District." *American Sociological Review* 27:807–27.

Farkas, George, Christy Lleras, and Steve Maczuga. 2002. "Does Oppositional Culture Exist in Minority and Poverty Peer Groups?" *American Sociological Review* 67:148–55.

Farkas, George, and Keven Vicknair. 1996. "Appropriate Tests of Racial Wage Discrimination Require Controls for Cognitive Skills." *American Sociological Review* 61:557–660.

- Ferguson, Ann Arnett. 2000. *Bad Boys: Public Schools in the Making of Black Masculinity*. Ann Arbor: University of Michigan Press.
- Ford, Donna Y., and J. John Harris, III. 1996. "Perceptions and Attitudes of Black Students Toward School, Achievement, and Other Educational Variables." *Child Development* 67:1141–52.
- Fordham, Signithia, and John U. Ogbu. 1986. "Black Students' School Success: Coping with the Burden of 'Acting White.'" *Urban Review* 18:176–206.
- Frisby, Craig, and Carolyn Tucker. 1993. "Black Children's Perception of Self: Implications for Educators." *Educational Forum* 57:146–56.
- Fryer, Ronald G., and Steven D. Levitt. 2004. "Understanding the Black-White Test Score Gap in the First Two Years of School." *Review of Economics and Statistics* 86:447–64.
- Harris, Angel L. 2006. "I (Don't) Hate School: Revisiting 'Oppositional Culture' Theory of Blacks' Resistance to Schooling." *Social Forces* 85:797–834.
- Horvat, Erin McNamara, and Kristine S. Lewis. 2003. "Reassessing the 'Burden of 'Acting White': The Importance of Peer Groups in Managing Academic Success." *Sociology of Education* 76:265–80.
- Jaffe, A. J., Ruth M. Cullen, and Thomas D. Boswell. 1980. *The Changing Demography of Spanish Americans*. New York: Academic Press.
- Lewis, Amanda E. 2003. *Race in the Schoolyard: Reproducing the Color Line in School*. New Brunswick, NJ: Rutgers University Press.
- MacLeod, Jay. 1987. *Ain't No Making It: Leveled Aspirations in a Low-Income Neighborhood*. Boulder, CO: Westview Press.
- Mickelson, Roslyn Arlin. 1990. "The Attitude-Achievement Paradox Among Black Adolescents." *Sociology of Education* 63:44–61.
- Morris, Edward W. 2005. "'Tuck in that Shirt!': Race, Class, Gender, and Discipline in an Urban School." *Sociological Perspectives* 48:25–48.
- Neal, Derek A., and William R. Johnson. 1996. "The Role of Premarket Factors in Black-White Wage Differences." *Journal of Political Economy* 104:869–95.
- O'Conner, Carla. 1999. "Race, Class, and Gender in America: Narratives of Opportunity Among Low-Income African American Youths." *Sociology of Education* 72:137–57.
- Ogbu, John U. 1978. *Minority Education and Caste: The American System in Cross-Cultural Perspective*. New York: Academic Press.
- . 1990. "Minority Education in Comparative Perspective." *Journal of Negro Education* 59:45–57.
- . 2003. *Black American Students in an Affluent Suburb: A Study of Academic Disengagement*. Mahwah, NJ: Lawrence Erlbaum.
- Ogbu, John U., and Herbert D. Simons. 1998. "Voluntary and Involuntary Minorities: A Cultural-Ecological Theory of School Performance with Some Implications for Education." *Anthropology and Education Quarterly* 29:155–88.
- O'Neill, June. 1990. "The Role of Human Capital in Earnings Differences Between Black and White Men." *Journal of Economic Perspectives* 4:25–45.
- Phillips, Meredith. 1998. "Early Inequalities: The Development of Ethnic Differences in Academic Achievement During Childhood." Unpublished Ph.D. dissertation, Department of Sociology, Northwestern University, Evanston, IL.
- Steinberg, Laurence, Sanford Dornbusch, and Bradford Brown. 1992. "Ethnic Differences in Adolescent Achievement: An Ecological Perspective." *American Psychologist* 47:723–29.
- Thernstrom, Abigail, and Stephan Thernstrom. 2003. *No Excuses: Closing the Racial Gap in Learning*. New York: Simon & Schuster.
- Tyson, Karolyn. 2002. "Weighing in: Elementary-Age Students and the Debate on Attitudes Toward School Among Black Students." *Social Forces* 80: 1157–89.
- . 2003. "Notes from the Back of the Room: Problems and Paradoxes in the Schooling of Young Black Students." *Sociology of Education* 76:326–43.
- Tyson, Karolyn, William Darity, Jr., and Domini Castellino. 2005. "Black Adolescents and the Dilemmas of High Achievement." *American Sociological Review* 70:582–605.
- U.S. Census Bureau. 2000. *The Hispanic Population in the United States: Population Characteristics, March 2000: Current Population Reports (P20-535)*. Washington, DC: U.S. Department of Commerce.

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