

# High School Course-Taking and Post-Secondary Institutional Selectivity

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**Abstract** Race shapes many aspects of students' high school experiences that are relevant to the college admissions process. We examine the racially-specific effects of high school course of study on college selectivity. Using NELS 1988–1994, we test how race and track interactively predict the prestige of the first post-secondary institution attended. We find support for a “redemptive equity model” of college prestige for Latinos, who attend more selective colleges than White students, net of background and academic variables. Asian American students also attend more selective institutions than White students. Results for African-American students are more complicated, in that the colleges they attend are not significantly different from those of Whites, on average. When we exclude students who attend historically Black colleges and universities, however, African-American students attend significantly more prestigious universities than Whites, net of other factors. We also find racially-specific effects of high school course of study, with Latinos, Asian Americans, and African-Americans appearing to benefit more from taking more rigorous academic courses than Whites.

**Keywords** College prestige · College selectivity · High school course-taking · Racial differences in college attendance · Racial differences in course-taking

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## Introduction

Institutional prestige rankings of major universities and colleges, such as those in the *US News and World Report*, regularly create a firestorm when released to the public. In fact, the prestige rankings of institutions may have an impact on a wide variety of outcomes for the students who attend those schools, including their future educational attainment, occupation, productivity, and income (Bowman and Mehay 2002; Monks 2000; Pascarella et al. 1989; Sewell 1971; Smart and Pascarella 1986; Spilerman and Lunde 1991; Thomas 2000). Students who attend higher prestige colleges may have higher incomes and may be more likely to enter high-status occupations than students who go to lower status colleges (Brewer et al. 1999; James et al. 1989; Rumberger and Thomas 1993; Trusheim and Crouse 1981, but see Black and Smith 2004; Brand and Halaby 2006; Dale and Krueger 2002 for opposing evidence). Even among elite colleges and universities, students' happiness and life satisfaction after college is positively associated with the selectivity of the institution they attended (Bowen and Bok 1998; Feldman and Newcomb 1969). Furthermore, colleges are important locations for students to develop networks, both of weak ties of acquaintances that may help their future careers (Granovetter 1973) and of stronger ties, including friends and marriage partners.

In this historical moment where most students can find *some* place to attend college (75% of high school graduates in 1992 attended college within two years of high school graduation; NCES 1997), the issue of which colleges students attend gains more importance for the possibilities of social mobility and/or maintenance of the social stratification system. This is especially true considering the fact that access and admissions to post-secondary institutions are shaped by students' socioeconomic background and race (Alexander and Eckland 1977; Alexander et al. 1987; Davies and Guppy 1997; Hearn 1991; Karabel and Astin 1975; Karen 2002; Massey et al. 2006) and that the influences on decisions to enroll in college have been shown to differ for African-Americans, Latinos, and Whites (Hurtado et al. 1997; Jackson 1990; Perna 2000; St. John 1991). In other words, once students are selected into higher education, their social background continues to play a direct role in influencing the prestige of the institutions they attend, net of their academic background. Even with the growth in college attendance rates for African-American students (Karen 1991), racial gaps in the selectivity of colleges attended remain, with African-American students attending less prestigious universities than White students and Latinos attending four-year colleges of approximately equal prestige with Whites (Hearn 1991; Karen 2002). National results for Asian American students have not been reported. In this paper, we investigate why a gap in college selectivity remains between students of different races.

Race shapes many aspects of the high school experience relevant to the college admissions process (Massey et al. 2006). For instance, White students are more likely to participate in extracurricular activities, thus enhancing their applications for college (Ingels et al. 2005). More relevant from our perspective, however, is the way that race influences the academic course of study that students follow during high school. The racial composition of academic classes in high schools is well-established: White and Asian American students are overrepresented in college preparatory classes while African-American and Latino students are overrepresented in general classes that do not prepare them as thoroughly for college education (Dauber et al. 1996; Massey et al. 2006; Mickelson 2001; Oakes 1985). Even among students enrolled in the same course of study, Whites and Asian Americans are overly concentrated in the more challenging courses (Mickelson 2001). For example, among students enrolled in college preparatory courses of study, Whites and

Asian Americans are overrepresented in the most challenging Advanced Placement courses. Although various scholars have found limited evidence that a student's high school course of study predicts the prestige of the college they attend (Davies and Guppy 1997; Hearn 1991; Karen 2002), we consider the possibility that course of study may have racially-specific effects that have heretofore been overlooked.

While previous research has examined the role of academic, socioeconomic, and racial background on the selectivity of college attended (Hearn 1991; Karen 2002), little focus has been put on the racially-specific processes during high school that most students experience (Massey et al. 2006). Therefore, in this paper, we investigate the potential impact that race and high school course-taking have on the selectivity of institution attended. Using the National Education Longitudinal Study 1988–1994, we compare college selectivity scores for students of different races who follow the same course of study in high school, in an attempt to discover whether high school course-taking might explain racial differences in the prestige of college attended. We also use a more nuanced measurement of high school course-taking than the current literature on college prestige, distinguishing among the various types of college preparatory courses of study that students follow during high school. We interpret our findings in light of three theories that help explain how race and high school course of study jointly shape inequality: persistent inequality, redemptive equity, and racialization and meritocracy. Before reviewing these theories, we will briefly review the extant literature that explains how race and high school course of study are associated with college selectivity, clarifying several relevant differences in the institutional environment that students face.

### **Race and Institutional Selectivity**

Students attend American colleges in an institutional environment in which the prestige rankings of colleges remain remarkably consistent, even as other aspects of the environment change (Gladieux 1980; Karen 1991). Typically, the prestige of an institution is inversely proportional to its selectivity, or the ease of admissions: more prestigious institutions admit a lower percentage of their applicants than less prestigious institutions. Although institutional prestige is not exactly synonymous with the institution's selectivity, the two concepts are very highly correlated.

The characteristics of students who pursue post-secondary education have changed throughout the post-World War II era. While educational opportunities for the American population in general increased dramatically following World War II with the expansion of the post-secondary sector, these expanded opportunities did not benefit previously underrepresented groups, such as ethnic minorities, until the late 1960s and 1970s (Karen 1991). College attendance rates for African-Americans more than tripled between 1960 and 1976. After 1976, however, these gains leveled off for ethnic minorities in the most selective colleges and universities, a change partly attributable to political mobilization among Whites and wealthy families to maintain their positions in these institutions (Lavin 2000). Many institutions, however, were able to maintain enrollment of ethnic minority students through the use of race-based affirmative action in admissions (Karen 1991), and some selective universities show differential admission rates by race (Espenshade et al. 2005).

As with many other parts of the educational system, race affects the post-secondary institutional environment as well. Among students who attended college directly after high school, racial differences in institutional prestige have been persistent, with scholars discovering these differences among high school graduates in the 1970s, (Davies and Guppy

1997), 1980s (Davies and Guppy 1997; Hearn 1991) and 1990s (Davies and Guppy 1997; Karen 2002). Although African-Americans increased their college attendance rates dramatically in the wake of the Civil Rights Movement, recent research has indicated that they still attend less prestigious colleges than do Whites (Karen 2002). Furthermore, historically Black colleges and universities (HBCUs), both public and private, provided opportunities for African-American students to attend college when other institutions would not admit them. Many of these colleges were founded by private philanthropic and religious organizations, while others were financed by the federal government through the 1890 Morrill Land-Grant Act (Brown and Davis 2001; Brown et al. 2001; Harvey and Williams 1989). Despite levels of funding that have been low in the past, HBCUs have been shown to have higher retention rates for their students than other institutions (Constantine 1995). There is also some indication that students who attend these schools accrue other academic and psychological benefits, even though HBCUs are, on average, less prestigious than other institutions (Berger and Milem 2000; Brown and Davis 2001; Brown et al. 2001; Constantine 1995).

The post-secondary institutional environment for Latinos differs in some ways from that of other racial and ethnic groups. Research conducted during the 1980s and 1990s suggested that Latinos were attending less prestigious colleges and universities than Whites (Hearn 1991), but these results were inconsistent (Karen 2002). Their patterns may be influenced by a process of “chain enrollment,” in which Latino students rely on their social ties in making decisions about where to attend college (Person and Rosenbaum 2006). In the admissions process, Latinos are considered to be a historically underrepresented minority group and hence are eligible for affirmative action (note that the period in question in this paper occurred prior to the more recent wave of state-level referenda prohibiting affirmative action in admissions). Elite universities appear to give Latinos some added advantage in admissions, but this weight is somewhat less than that given to African-American students and to athletes (Espenshade et al. 2004). In addition, Latinos (and African-Americans) who take the SAT are disproportionately more likely to send their SAT scores only to non-selective universities (Thomas 2004).

In contrast to the experiences of Latinos and African-Americans, Asian Americans have experienced a great deal of success in the formal educational environment. In fact, the high achievement of many Asian ethnic groups in the U.S. has earned them the moniker of “model minority” and their educational performance has surpassed that of Whites in many respects (Kao 1995; Kao and Thompson 2003). Yet there is reason to suspect that they face some disadvantage in the college admissions process. Historically, Asian Americans were excluded from elite colleges and universities, until affirmative action opened the doors of these institutions to them in the 1970s (Bunzel and Au 1987). Since then, Asian Americans have had lower acceptance rates at elite universities than members of other racial groups, including Whites (Bunzel and Au 1987; Espenshade et al. 2004, 2005; Nakanishi 1989). The extant literature on college prestige for Asian Americans has focused primarily on admissions to elite colleges and universities. In this study, we include a broader spectrum of four-year colleges and universities. We were unable to find prior research on the prestige of institutions attended for a national sample of Asian American students. Given the relative success of Asian American students in the American educational system (Kao and Thompson 2003), we suspect that they may attend more prestigious institutions than Whites. This suspicion is tempered somewhat by their lower acceptance rates at elite institutions (Bunzel and Au 1987; Espenshade et al. 2004, 2005; Nakanishi 1989). In sum, a growing body of work has established that race matters in a variety of different ways in the multi-step process of matching students and colleges. Next, we turn to research that links high school course-taking patterns and institutional selectivity.

## High School Course-Taking and Institutional Selectivity

In a decentralized post-secondary educational system like that of the U.S., the potentially bewildering array of college choices demands that students have some level of knowledge about the system when making choices about which institution to attend. This knowledge might come from highly educated parents, or it might come from guidance counselors and teachers in college preparatory courses (Oakes 1985). This is but one way that students' high school course of study can have an impact on the prestige of the college they attend. In addition, students who follow elite courses of academic study possess greater numbers of advanced academic course credits upon high school graduation. These students might find themselves better prepared for the college admissions process than students who do not. In other words, students who study on more challenging courses of study have access to more resources and greater opportunities to gain the course credits that colleges will recognize and prefer on transcripts.

Nevertheless, there is conflicting evidence over whether high school course of study has a significant impact on the prestige of the post-secondary institutions that students attend. Some have found that students on an academic track attended significantly more prestigious institutions than those on other tracks (Davies and Guppy 1997; Hearn 1991). Meanwhile, another study found no significant difference in selectivity between those who were on an academic track and those who were not, net of other factors (Karen 2002). These previous studies, however, have not sufficiently disaggregated course of study to capture fine distinctions among them, nor does it take into account research that indicates that high schools are not “tracked” to the same extent that they may have been in the past (e.g., Lucas 1999). We build on prior research by employing a measure that distinguishes the academic intensity of different courses of study (Adelman 2004, 1999). We hypothesize that students who follow more elite courses of study will attend more prestigious colleges and universities immediately following high school. We also move beyond the extant literature by clarifying how these effects may vary by race.

## High School Course-Taking and Race: Alternative Explanations for College Selectivity

We contend that race and high school course-taking patterns work together to influence the selectivity of the college that students attend. Below, we identify three theories, developed to apply more generally to the effects of race in educational systems, which may help explain how race and high school course of study jointly shape inequality: persistent inequality, redemptive equity, and racialization and meritocracy. Persistent inequality and redemptive equity allow us to make predictions regarding the impact of race on college admissions, while racialized meritocracy allows us to make predictions regarding the racially-specific impact of course-taking patterns.

### Persistent Inequality

The “persistent inequality” explanation considers that a student's social origins, including their racial and educational background, should predict the prestige of the college a student attends. According to this perspective, both the student's race and high school course of study provide differing opportunities for attending higher prestige colleges. The effect for course-taking is straightforward, as more prestigious universities seek students who follow

more elite high school courses of study and students in more elite courses seek more prestigious universities. The race effect is more complicated given the expansion of educational opportunities. Although post-secondary educational opportunities expanded for racial and ethnic minorities during the 1970s and 1980s, this expansion did not necessarily coincide with greater minority access to more prestigious institutions (Karen 1991). A situation of persistent inequality could occur at the same time as general expansion in the post-secondary institutional environment if the matching of students from lower prestige backgrounds with lower prestige institutions continued, as did the matching of students from higher prestige backgrounds with higher prestige institutions. As long as the upper tiers of the post-secondary system do not become undersubscribed with high prestige students, they need not admit students from lower prestige backgrounds (Hout et al. 1993).<sup>1</sup>

In fact, evidence suggests that this process of persistent inequality characterized the experience of some racial groups, but not all. Specifically, persistent inequality characterizes the experiences of African-Americans students, who attend less prestigious institutions than Whites, but not Latino students, who attend equally prestigious four-year institutions as Whites immediately after high school (Karen 2002). Although we have found no national-level evidence regarding Asian American students, we suspect that the ordering of categories specified in the traditional persistent inequality framework, with White students more advantaged than students from other racial/ethnic groups, does not apply to Asian American students. Given that Asian American students outperform students from other racial/ethnic groups on most indicators of educational success (Kao 1995; Kao and Thompson 2003), the persistent inequality perspective with respect to Asian American students might suggest that they attend more prestigious colleges than White students.

Under conditions of persistent inequality, students who take less elite and rigorous courses should attend less prestigious colleges than students who take more elite and rigorous courses, net of race. Specifically, Asian American students who follow more rigorous courses of study will attend more prestigious institutions than Asian American students who follow less elite courses of study. The same pattern of relationship between high school course-taking patterns and post-secondary institutional selectivity will hold true for other racial/ethnic groups as well. Furthermore, given continuing socioeconomic differences among the populations, we would expect that African-American and Latino students would attend less prestigious schools than Whites who take similar courses. Likewise, Whites with more rigorous course-taking patterns might attend colleges of equal or lower prestige than Asian Americans with less rigorous course-taking patterns. Additionally, we would expect to find that African-American and Latino students with lower-level courses of study would attend less prestigious colleges than Whites with similar courses of study, who would, in turn, attend less prestigious colleges than Asian Americans with similar courses of study.

### Redemptive Equity

The redemptive equity explanation enables different predictions regarding the prestige of institution attended for members of different racial groups. It is similar to the previous perspective because it assumes that students who study in more academically elite courses

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<sup>1</sup> Hout et al.'s argument is based on the socioeconomic background of the student: they do not consider race or gender.

should attend more prestigious colleges. Yet, the redemptive equity explanation differs from the persistent inequality perspective because it posits that ascription-related factors normally associated with limited opportunity in the educational system, such as being African-American or Latino, would actually advantage students in the college admissions process (Hearn 1991). In other words, while the persistent inequality hypothesis predicts that Latino and African-American students would attend *less* prestigious institutions than Whites and Asian Americans, the redemptive equity hypothesis predicts that African-American and Latino students would attend *more* prestigious institutions than Whites and Asian Americans. This condition of redemptive equity might characterize an educational system that is committed to the principles of affirmative action, in that equally well-qualified students from historically disadvantaged backgrounds would be advantaged in gaining admissions to prestigious colleges and universities. Similarly, this perspective might predict that Asian American students would be relatively disadvantaged in the college admissions process, much as Whites would, because of the relatively advantaged position that they currently hold in elementary and secondary education.

Under conditions of redemptive equity, we would hypothesize that African-American and Latino students are advantaged in relation to White and Asian American students. We would expect to find that African-American and Latino students on the same course of study as White students will attend more prestigious colleges and universities. We would also expect to find that Whites and Asian Americans following elite courses of study would not benefit from them as much as do Latino and African-American students on elite courses of study.

### Racialization and Meritocracy

While both the persistent inequality and redemptive equity explanations allow us to make predictions about the ordering of racial groups in respect to college prestige, a racialized meritocracy argument allows us to problematize the impact of patterns of course-taking upon members of various racial/ethnic groups. The process of matching students to colleges is a complicated one in which multiple decisions are made, including students' decisions to attend college rather than work or other options (predisposition), decisions regarding searches and comparisons among different institutions, and decisions regarding which colleges to attend (Hossler and Gallagher 1987). In making these decisions, students may take into consideration their prior experiences with the formal educational system. A racialized meritocracy argument considers the possibility that the student's race will shape the meaning and the import that they give to the school's decisions regarding the classes in which they are enrolled.

The racialized meritocracy perspective, as Blau (2003) articulates it, argues that White culture in general, and White students more particularly, have bought into a meritocratic myth. Many White students believe the implicit signals that schools send them through decisions such as those regarding placement in gifted and talented programs. As a result, White students with high achievement in high school go onto college, but White students with lower levels of achievement in high school are less likely to pursue post-secondary education.

A central portion of Blau's argument, supported by a growing body of research, is that aspects of the formal educational system, such as decisions regarding course placement, do not have as negative an impact on the educational expectations and attainment of African-American students as they do on White students (see Blau et al. 2003; Moller et al. 2006; Stearns et al. 2007). This is because Black communities are able to provide support for

children who are not identified as “high achievers” in school. African-American students are thus somewhat resistant to the signals that schools send them and their aspirations and educational goals may not be as susceptible to their course-taking as those of White students, who have bought into the “meritocracy myth.”<sup>2</sup> In other words, their aspirations and educational goals are dependent, to some extent, on their race and the political climate in which they live.

Thus, the racialized meritocracy theory would predict a linear relationship between high school course of study and college prestige for White students, with those studying on the most elite courses of study going onto the most prestigious universities. It would also predict a positive, but less strongly linear, relationship for Black students, who may have their aspirations less shaped by their course of study and more so by experiences outside of school.

One possible reading of this hypothesis is that African-American students in lower courses of study might reach more prestigious colleges than White students in lower courses of study simply by ignoring the signals about their ability that they receive from their schools. This reading is, however, oversimplified in that it disregards the student’s level of preparation and the political climate in which students apply to and attend college. This perspective does not imply that simply overlooking the elementary and secondary school’s feedback is sufficient to allow one to go to college, but it does allow us to argue that in cases where preparation is adequate, but not outstanding, overlooking the high school’s negative feedback may result in better outcomes for African-American students. For those students who graduate with enough credits to pursue post-secondary education, but who have not been exposed to the highest-level courses their high schools have to offer, this theory predicts that African-American students will attend more prestigious colleges than Whites in the same position, because they will be less likely to have their aspirations hindered by their less advanced course-taking patterns. The political climate also helps to explain the issue, as colleges and universities may be more likely to admit these African-American students than they would be to admit similarly-prepared White students (Espenshade et al. 2004). The colleges and universities cannot, however, admit the students if they do not apply and Blau’s theory predicts that Black students will be more likely to apply.

Although Blau does not explicitly argue as such, one possible interpretation of her findings with respect to Latino and Asian American students, many of them first and second generation Americans, is that they are neither as harmed as White students by the myth of meritocracy, nor as protected from it as African-American students. On most of the analyses presented in her work, Asian American and Latino students fall somewhere in between the poles of African-American and White students. Thus, it is reasonable to expect to find different processes at work in these different racial/ethnic groups.

To summarize, we have three competing, although not necessarily mutually exclusive explanations:

1. *Persistent inequality*: Students on more elite courses of study will attend more prestigious institutions than students on less elite courses of study. African-American and Latino students will attend *less* selective institutions than White students when they follow the same course of study in high school. Asian American students will attend *more* selective institutions than White students when they follow the same

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<sup>2</sup> One issue that Blau’s work does not address is whether high-achieving African-American students buy into the meritocracy myth. Future research should address this point.



- course of study in high school. There will be no interaction effect between race and course-taking, such that the white/minority gap in college selectivity is constant across course-taking levels.
2. *Redemptive equity*: Students on more elite courses of study will attend more prestigious institutions than students on less elite courses of study. African-American and Latino students will attend *more* selective institutions than White students. White students will attend more selective institutions than Asian American students. There will be an interaction effect between race and course-taking, such that the White/minority gap in college selectivity will not be constant across course-taking levels.
  3. *Racialized meritocracy*: The relationship between high school course-taking patterns and institutional selectivity will be racially specific, differing for members of various racial/ethnic groups. Whites in the most elite courses will attend more selective universities than students of color in the most elite courses, but the pattern will differ at the medium and low levels of course-taking intensity. There is a linear relationship between course intensity and institutional prestige for White students. The relationship between course intensity and institutional prestige for African-American students will be less strongly linear, with more similar levels of institutional selectivity across tracks. Results for Asian American and Latino students will fall somewhere between those for African-Americans and Whites.

## Data and Methods

We use the National Education Longitudinal Study 1988–1994 (NELS) to examine institutional prestige, race, and high school course-taking patterns. This study follows a nationally representative sample of U.S. students from the eighth grade in 1988 to their late twenties in 2000. Data were gathered in 1988, 1990, 1992, 1994, and 2000. Students are only included in our sample if they participated in the study in 1988, 1990, and 1994 and if they reported attending a four-year post-secondary institution in 1994: with deletions for missing data on our independent and dependent variables, we are left with a sample of 2660 students.<sup>3</sup> This sample attrition led us to test whether our results were caused by selection bias, using a two-stage Heckman selection model (Heckman 2005). For the most part, the results presented here were also present when controlling for the degree of selection bias introduced by missing data. The few instances in which the results are not robust are footnoted. The inconsistencies do not alter the interpretations of the results that we present.

<sup>3</sup> The original sample in 1988 included 24,599 students. This sample was freshened in 1990 and 1992. A subsample of 14,915 students was followed into the 1994 wave (National Center for Education Statistics 2002). Of those respondents 5,346 reported attending a 4-year post-secondary institution their first year out of high school. We then matched their reported post-secondary institution to the College Board dataset in order to measure prestige. In this matching process approximately 1,336 cases were lost due to two factors: (1) the school was not listed on one of the two datasets or (2) the school did not report an average ACT or SAT score. This brought our sample to roughly 4,010 cases. Of those cases, 1,350 were missing data from the NELS dataset on one or more of our independent variables.

In constructing our sample several potential biases are introduced. At the school level our sample is biased towards the Northeast region and private schools. On the individual level, our sample is more likely to be on a higher course of study, has higher GPA and SAT scores, and is more likely to participate in extracurricular activities. A racial and economic bias is also introduced where White and higher SES students are over-represented in our sample. Importantly, our dependent variable is not biased: there are no significant differences in the dependent variable between those who do and do not have full data on our independent variables.

There is also a second type of attrition that affects the import of the story that we tell in these results. In focusing on students who attend college directly after high school, we are limiting our results to an advantaged sample. Students who attend a four-year college directly after high school constitute a different slice of the population than those students who will ever attend college, as well as those who attend different types of colleges, and those who attend none. In fact, Table 1 details the differences on selected variables among five different samples: the entire NELS sample; those who attend any college right after high school; those who attend a non-selective college right after high school; those who attend a four-year college directly following high school; and our sample (a subset of those who attend four-year college directly after high school). Most notably from our perspective, we see an overrepresentation of Whites and Asian Americans among the four-year college attendees and an overrepresentation of Latinos among those who attend non-selective institutions. Thus, previous findings that report Latinos' attending four-year colleges directly after high school that are of equal prestige with Whites have not taken this level of selection into account (Hearn 1991; Karen 2002). Students who study on the most intensive courses of study are also overrepresented among those who attend four-year colleges directly following high school, while those on the least intensive courses of study are disproportionately represented at non-selective institutions.

Table 2 expands on these results by showing the racially specific college attendance rates from NELS. While approximately 60% of the NELS sample attends some type of college directly following high school, there is a significant racial difference in this pattern. Over 80% of Asian Americans attend some college, while 65.8% of Whites, 53.7% of African-Americans, and 53.3% of Latinos do so. More than half of the NELS Asian American students attend four-year colleges directly after high school, while smaller

**Table 1** Means and standard deviations (in parentheses) of independent variables for different NELS samples based on college attendance patterns: NELS 1988–1994

Variable name	NELS sample	All college students	Non-four year college students	Four-year college students	Final sample
White	0.66 (0.47)	0.68 (0.46)	0.65 (0.48)	0.71 (0.45)	0.78 (0.42)
Asian American	0.07 (0.26)	0.09 (0.29)	0.08 (0.27)	0.10 (0.31)	0.10 (0.30)
Latino	0.14 (0.35)	0.12 (0.32)	0.16 (0.37)	0.09 (0.28)	0.06 (0.24)
African-American	0.11 (0.32)	0.10 (0.29)	0.10 (0.29)	0.10 (0.29)	0.07 (0.25)
Low Course Intensity Quintiles	0.58 (0.49)	0.46 (0.50)	0.74 (0.44)	0.29 (0.45)	0.27 (0.45)
Middle Course Intensity Quintile	0.20 (0.40)	0.25 (0.43)	0.17 (0.38)	0.30 (0.46)	0.30 (0.46)
High Course Intensity Quintile	0.22 (0.42)	0.29 (0.46)	0.09 (0.29)	0.42 (0.49)	0.43 (0.50)
SES	-0.09 (0.81)	0.16 (0.77)	-0.13 (0.70)	0.36 (0.76)	0.42 (0.73)
Female	0.51 (0.50)	0.53 (0.50)	0.53 (0.50)	0.53 (0.50)	0.54 (0.50)
Average Grades	2.27 (0.87)	2.57 (0.77)	2.16 (0.70)	2.85 (0.69)	2.90 (0.66)
Student SAT	914.25 (215.74)	933.17 (212.63)	803.54 (167.16)	983.49 (207.05)	985.43 (206.38)
N	15009	9038	3692	5346	2708

**Table 2** College attendance rates by race: NELS 1988–2000

	All colleges	Non-selective colleges	Four-year colleges
White	65.8	25.4	40.3
African-American	53.7	22.1	31.7
Latino	53.3	30.5	22.8
Asian American	82.8	28.7	54.1
Total	60.2	24.6	35.6

*N* = 15009

percentages of Whites (40.3%), African-Americans (31.7%), and Latinos (22.8%) do so. Therefore, in interpreting our results, we must keep in mind that there is a level of selection, over and above the selection due to missing data, caused by a variety of social processes that lead to racial disparities in the percentage of students attending college directly after high school. Although these results have been reported elsewhere (Baker and Velez 1996; Hauser and Anderson 1991; Kao and Thompson 2003), we reiterate them here with the aim of fully contextualizing our results.

Nevertheless, we make the decision to concentrate on those who go directly to a four-year college for two reasons. First, given our primary interest in the impact of high school experiences on college admissions, we focused our sample on those students who attended college directly after high school because they would not have had an opportunity to build a post-high school resume that would influence college admissions. Second, we aim to produce results that are as comparable as possible to earlier results on the impact of ascription and achievement-related factors on college prestige (Hearn 1991; Karen 2002). Future work will consider whether our results are robust with the inclusion of non-traditional college students, by considering the later college careers of students who may transfer from non-selective to selective schools.

### Dependent Variable

We use a measure of institutional selectivity, which comes from the College Board Annual Survey of Colleges from 1992. That survey asked colleges to “indicate test score ranges of the middle 50% of your fall 1990 freshmen class.” Colleges then reported the 25th and 75th percentile SAT or ACT scores for these students. We use the 75th percentile as a measure of institutional selectivity.<sup>4</sup> This variable ranges from 720 to 1520. SAT scores are a commonly used measure of institutional selectivity (Davies and Guppy 1997; Hearn 1991; Karen 2002).

### Key Independent Variables

Our primary variables of interest are students’ race and high school course of study. Race is the student’s self-identified racial category and is coded as Asian, Latino, and African-American (White is the reference category). Measuring the high school course of study presents more challenges, however because researchers have created multiple methods to

<sup>4</sup> Throughout this paper, we use the SAT scores. For those colleges that only reported ACT scores (837 students attended these schools), we converted the ACT scores to SAT scores, using the College Board’s concordance table (Dorans et al. 1997). Although other sources, such as the Integrated Postsecondary Education Data System (IPEDS), include information on the 75th percentile in SAT scores for colleges in more recent years, such data were not available from IPEDS for colleges in the early 1990s.

measure this concept.<sup>5</sup> We pursue an approach originated by Adelman (1999) in the “Answers in the Toolbox” study, which was based on High School and Beyond data. In 2004, he adapted his measures to fit NELS data. We use the NELS revision.

Using high school students’ transcripts, Adelman created a course intensity index. In the NELS, this index has thirty-one levels of intensity, each of which is comprised of a combination of Carnegie units earned in various subjects and consideration of whether those units were earned in AP or remedial courses. For instance, the highest of the thirty-one levels is made up of the following: at least 3.75 Carnegie units of English, none of which may be remedial; at least 3.75 Carnegie units of math, one of which must be higher than Algebra 2 and none of which may be remedial; more than 2.0 Carnegie units of science, which must be biology, chemistry, or physics; more than 2.0 Carnegie units of history and social studies; some computer science; and more than one Advanced Placement course. As the course intensity index proceeds downward through the 31 levels, Carnegie units in core subjects such as English and math decline, as do requirements that the math courses be more advanced than Algebra 2.

Adelman notes that there is some “statistical noise” in his index of course intensity and recommends using a measure that divides the thirty-one levels into five quintiles. These quintiles combine several of his 31 levels together, such that there are various combinations of course credits and types of courses (see Appendix 1 for details). We follow his advice in this regard, with some caveats. Due to small sample sizes, we combine the lowest three quintiles into one “low course intensity” category.<sup>6</sup> The second quintile is considered “middle course intensity,” and the highest quintile “high course intensity.”

We also create variables that measure whether the impact of course intensity differs by race. These variables are created by interacting each of the race variables with each of the course intensity category variables. We therefore have twelve variables with titles such as Asian American low course intensity, Asian American middle course intensity, Asian American high course intensity, etc.

## Control Variables

Throughout the analyses, we control for several independent variables that have been shown to predict the prestige of college attended. Students from public schools (coded 1 for public high school and 0 for private) have lower achievement scores, on average, and are less likely to pursue post-secondary degrees than students from private schools (Blau 2003). Region of the country may also influence college prestige because southern and rural schools have historically offered poorer quality public education, due to their comparatively lower funding levels than other areas of the country (Roscigno et al. 2006; U.S. Department of Education 2002: Table 167). In addition, many elite colleges are

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<sup>5</sup> Some researchers have created measures of course sequences, primarily sequences of math and science courses (e.g., Schneider et al. 1998). Although this method is valuable, we chose not to pursue this path because the sequences created focused only on science and math, while colleges assess other courses taken as well. Lucas (1999) developed another strategy to measure high school course of study. Lucas created course-based indicators of high school students’ records, examining the course titles of the students’ transcripts, and categorizing them into five categories—remedial; business and vocational; lower college; regular college; and elite college. Lucas’s approach does not focus, however, on the credits earned with the various types of courses.

<sup>6</sup> College attendance is prevalent even in these lowest quintiles. Although the students who attend college tend to be of higher socioeconomic status than those students from the lowest quintiles who do not attend college, their socioeconomic status does not surpass the status of students in the most elite track.

geographically concentrated in the Northeast. Urbanicity is measured as suburban (reference category), rural, and urban: region of the country is measured as North East (reference category), Midwest, West, and South.

For the student measures we use a variety of background measures, including demographic measures and those designed to tap into academic background and preparation for college. Students self-report their gender (male is the reference category) and their age. Gender has been shown to predict prestige of college attended, with male students attending significantly more prestigious colleges than females (Hearn 1991; Karen 1991). In previous research, age has also been shown to be associated with college attendance (Bers and Smith 1987).

Socioeconomic status has multiple possible pathways through which it influences college choice and thus we use several different variables to measure it. Students from lower socioeconomic classes attend less selective colleges and universities than students from higher socioeconomic classes, in part because of higher levels of academic preparation and because of greater knowledge about how to make the system of higher education work best for them (Akerhielm et al. 1998; Hearn 1991; Karabel and Astin 1975; Karen 2002). Parental SES is measured in 1988 as a standardized composite of father's education and occupation, mother's education and occupation, and family income. Socioeconomic backgrounds are also important because parents with larger incomes and greater amounts of wealth have a greater ability to pay for college, particularly for more elite colleges that tend to be more expensive. Following Ordovensky (1995), we use a measure that combines income and institutional cost, given that people at differing income levels will be sensitive to tuition in different ways. Our variable is calculated as the ratio of family income in 1991 to in-state tuition and fees.

One other aspect of college costs is the availability of financial aid, which may reduce the total college cost. Financial aid can thus be considered a measure of economic capital along with parental contributions to education. Although extant literature has established the importance of financial aid on college *enrollment* decisions (Heller 1998; Hossler et al. 1999; Mumper 1998; St. John and Noell 1989), especially for low-income students and students of color, evidence shows that it has a weak impact, if any, on college choice (Nora 2004; Perna and Titus 2004). The financial aid data available in NELS from 1992, the time point at which students were making their decisions about which colleges to attend, are somewhat spotty because the availability of financial aid is only asked of those students who have been admitted to their first or second choice universities. Thus, we combine a measure of financial aid importance with another measure of the economic capital on which students can draw in attending college: parental willingness to pay for college. Our measure equals 1 if the students said that neither financial aid nor college costs was at all important in shaping their college attendance decision. It taps into the importance of cost in college preferences, as Hurtado et al. (1997) do and Hossler et al. (1989) note is so important, and proxies the amount of economic capital that students believe they can mobilize from various sources to pay for college.

For academic background variables, we control for students' grades and SAT scores. In addition, we control for several variables that proxy for a student's predisposition to go to college, including extracurricular activity participation. The students' GPA comes from their high school transcripts, which reflect their performance in math, English, science, and social studies courses.<sup>7</sup> Student SAT is a NELS revised SAT score that equates ACT and

<sup>7</sup> If grades from one of these categories were missing, we took the average of the three remaining categories.

PSAT scores for students whose transcripts did not indicate an SAT score but indicated one of the former. Both SAT scores and GPA are strongly positively associated with the prestige of institution attended (Alexander et al. 1987; Hearn 1991; Karabel and Astin 1975; Karen 2002). Additionally, in the twelfth grade, students reported whether they participated in extracurricular activities (a dummy variable coded 1 if they participated in extracurricular activities and 0 if they did not). Those who participate in extracurricular activities have been found to attend more selective colleges than those who do not (Hearn 1991). Finally, the school-based resources upon which students draw in applying to college vary widely. Unfortunately, we do not have good measures of these resources at the school level: therefore, we construct an additive scale designed to measure how much the students have utilized school-based help with applications to college, college essays, and financial aid applications. It ranges from 0 to 3, with 0 denoting no help and 3 denoting help with all three portions of the college application.

### Analytic Strategy

In the tables that follow, we analyze institutional selectivity using the aforementioned independent variables as predictors. First, we examine the means on our dependent variables for various categories of our independent variables, using ANOVA to determine whether mean differences are significant. This first step will demonstrate differences that may be obscured in the multivariate models. In multivariate models, following Hearn (1991), Davies and Guppy (1997), and Karen (2002), we run weighted OLS models in STATA (STATA/SE 9.0) using Huber/White/sandwich robust variance estimates and a correction for clustered observations (Rogers 1993; Williams 2000). These models will show whether the bivariate relationships we find in the ANOVA models stand up to the introduction of our control variables and will highlight which of our three major hypotheses are robust to the introduction of controls.<sup>8</sup> We use a panel weight for all respondents to the 1994 questionnaire, as NCES (1996) recommends (Table 3).

### Results

Table 4 shows the results of bivariate ANOVA analyses, using our dependent variable and some key independent variables. The results are consistent with several of our hypotheses. Asian American students attend more prestigious schools than Whites, while results for African-American and Latino students show that they attend schools with less institutional selectivity than Whites. We also find that there is a positive relationship between the intensity of high school curriculum and prestige of college attended: those students who followed more intensive courses of study also attend more prestigious colleges than students who followed less intensive courses of study.

In the multivariate analyses, Table 5 shows the results from OLS models of institutional selectivity. Model 1 includes variables describing the high schools, as well as individual-level indicators of ascriptive status and academic background variables. Model 1 shows that, net of all other factors, Latino teens attend more prestigious colleges than those of White teens. Our bivariate results in Table 4 showed no significant difference in college

<sup>8</sup> The within-school sample size is sufficiently small (44% of our observations come from high schools with fewer than five students) so that hierarchical linear models are not appropriate (Bryk and Raudenbush 1992).

**Table 3** Variable names, variable descriptions, means and standard deviations for independent and dependent variables: NELS 1988–1994

Variable name	Variable description	Mean	SD
<i>Dependent variable</i>			
College SAT	75th percentile SAT score of middle 50% of college's freshman class, 1990	1126.59	130.68
<i>Independent variables</i>			
<i>Student variables</i>			
White	1 = student is White, 0 = else	0.78	0.42
Asian American	1 = student is Asian American, 0 = else	0.10	0.30
Latino	1 = student is Latino, 0 = else	0.06	0.24
African-American	1 = student is African-American, 0 = else	0.07	0.25
Low Course Intensity Quintiles	1 = student is in the first, second, or third Adelman quintile, 0 = else	0.27	0.45
Middle Course Intensity Quintile	1 = student is in the 4th Adelman quintile, 0 = else	0.30	0.50
High Course Intensity Quintile	1 = student is in the 5th Adelman quintile, 0 = else	0.43	0.50
White Low Course Intensity	1 = student is White in lowest course intensity grouping, 0 = else	0.21	0.41
White Middle Course Intensity	1 = student is White in medium course intensity grouping, 0 = else	0.23	0.42
White High Course Intensity	1 = student is White in highest course intensity grouping, 0 = else	0.33	0.47
AfAm Low Course Intensity	1 = student is African-American in lowest course intensity grouping, 0 = else	0.02	0.15
AfAm Middle Course Intensity	1 = student is African-American in medium course intensity grouping, 0 = else	0.02	0.14
AfAm High Course Intensity	1 = student is African-American in highest course intensity grouping, 0 = else	0.02	0.14
Latino Low Course Intensity	1 = student is Latino in lowest course intensity grouping, 0 = else	0.02	0.14
Latino Middle Course Intensity	1 = student is Latino in medium course intensity grouping, 0 = else	0.02	0.14
Latino High Course Intensity	1 = student is Latino in highest course intensity grouping, 0 = else	0.02	0.15
Asian Low Course Intensity	1 = student is Asian American in lowest course intensity grouping, 0 = else	0.01	0.10
Asian Middle Course Intensity	1 = student is Asian American in medium course intensity grouping, 0 = else	0.02	0.15
Asian High Course Intensity	1 = student is Asian American in highest course intensity grouping, 0 = else	0.06	0.24
HBCU	1 = HBCU school, 0 = else	0.02	0.13
Age	Age top coded at 20	18.23	0.47
SES	Socio economic status composite	0.42	0.73
Male	1 = student is male, 0 = else	0.47	0.50
Female	1 = student is female, 0 = else	0.54	0.50
Tuition/income ratio	Ratio of family income in 1991 to college tuition	21.39	25.86

**Table 3** continued

Variable name	Variable description	Mean	SD
Perceived parental financial support	Student reported neither tuition nor financial aid figured into college choice	0.13	0.34
Average Grades	Average grades composite	2.90	0.66
Student SAT	Student's SAT score or ACT/PSAT equivalent	985.43	206.38
Extracurricular Participation	1 = participated in extracurricular activity; 0 = did not participate	0.93	0.25
School help with applications	Scale of extent to which student received help from school with college and financial aid applications and college essays: range 0–3	1.36	1.08
School variables			
North East	1 = school is in north east, 0 = else	0.22	0.42
Western	1 = school is in west, 0 = else	0.14	0.35
Southern	1 = school is in south, 0 = else	0.33	0.47
Midwest	1 = school is in midwest, 0 = else	0.31	0.46
Suburb	1 = school is in suburbs, 0 = else	0.40	0.49
Rural	1 = school is rural, 0 = else	0.29	0.45
Urban	1 = school is urban, 0 = else	0.31	0.46
Public School	1 = public school, 0 = else	0.76	0.43

$N = 2708$

**Table 4** 75th percentile institutional SAT scores for key independent variables: NELS 1988–1994

Variable name	SAT score			$N$
	Mean	$p$	SD	
White (reference)	1126.97		123.92	2083
Asian American	1185.30	***	136.74	267
Latino	1091.57	*	139.86	172
African-American	1067.32	***	152.72	177
Low Course Intensity Quintiles	1066.12	***	121.26	740
Middle Course Intensity Quintile	1115.66		120.01	797
High Course Intensity Quintile	1172.24	***	126.28	1171

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

prestige between Whites and Latinos, so the significant difference here is due to the varying backgrounds of these students. Other testing reveals that it is the inclusion of socioeconomic status that renders the comparison between Whites and Latinos significant. In addition, Asian American students attend significantly more prestigious colleges than White students, net of other variables. There is no significant difference between the prestige of college attended for African-American and White students, net of other factors.

The control variables also illustrate students from higher socioeconomic classes and those with better academic profiles attend more prestigious schools. In addition, as the ratio of tuition to income increases, college selectivity declines significantly. Those students



who can rely on their social networks for financial support attend significantly more selective colleges than students who say that college costs and/or financial aid are important in their college decisions. Somewhat surprisingly, however, course intensity has no significant impact on institutional prestige in Model 1. These results are consistent with those of Karen (2002), even though we used a different and more detailed measure of high school course-taking patterns. The results are, however, net of some other powerful controls, including student SAT scores.<sup>9</sup>

In order to test our hypotheses regarding the potentially different impact of course of study on students of different racial groups, Model 2 in Table 5 includes the interaction terms between race and course intensity. Model 2 indicates that such effects are evident, net of the students' demographic characteristics. As expected, White students following more intensive courses of study attend significantly more selective institutions than Whites with fewer elite academic courses, but we see no such benefit for African-American students.<sup>10</sup> In other words, African-American students who take the most elite courses do not attend significantly more selective universities than Whites who follow a comparably less challenging series of courses during high school. In fact, African-American students taking the lowest and middle cluster of courses attend significantly less selective universities than Whites in the middle category. Meanwhile, Asian American and Latino students in the most elite courses of study attend significantly more selective universities than Whites in the middle range of course-taking. Asian-American students following the least elite course-taking pattern attend significantly less selective universities than Whites in the middle course-taking pattern, however. Predicted values based on these regression results (shown in Table 6) indicate that Asian-Americans and Latinos, especially those with the most elite course schedules from high school, are generally at the top of the hierarchy with respect to the selectivity of institution attended, with African-Americans at the bottom, regardless of the intensity of the courses they followed during high school.

With the inclusion of the academic background variables in Model 3, however, many of our results for the interaction variables of course intensity and race diminish in significance. Net of academic background and demographic controls, Whites and African-Americans both seem to realize no benefit from pursuing the most elite courses of study in high school in terms of the selectivity of institution attended. Our results for Latinos and Asian Americans are, however, more robust to the inclusion of the variables for GPA and SAT scores, with the exception of the significant coefficient for Asian Americans on the least elite course of study. It appears from these results that any benefit for pursuing these courses of study that exists net of higher GPA and SAT scores is realized by Asian American and Latino students, but not by Whites and African-Americans.

Finally, however, we cannot neglect the fact that the institutional environment that African-American students face contains some options that may be perceived to be less available to students of other racial and ethnic groups. Historically Black colleges and universities (HBCUs) have served the Black population of the U.S. in important ways, but they are less selective on average than other institutions. Our findings for African-American students may be a result of the fact that they are more likely than students of other racial/ethnic groups to attend HBCUs. Therefore, in Table 5, we run three models that

<sup>9</sup> The coefficient for "high course intensity" is statistically significant and positive when student's SAT scores are not included in the model.

<sup>10</sup> In models run with the Heckman selection adjustment, White middle track is not statistically significant and Latino low track is statistically significant in a positive direction.

**Table 5** Beta coefficients from OLS models of 75th percentile SAT scores for first institution attended: students from NELS 1988–1994

	College selectivity (SAT scores)											
	With HBCU attendees						Without HBCU attendees					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Beta	SE	p	Beta	SE	p
Intercept	845.13 ***	91.77	1273.56 ***	95.46 ***	852.38 ***	91.81 ***	849.37 ***	90.62	1281.93 ***	94.66 ***	854.77 ***	94.84 ***
<i>Student characteristics</i>												
White (reference)												
Asian American	26.20 **	9.67					25.58 **	9.61				
Latino	40.39 **	13.05					41.87 **	13.13				
African-American	0.01	13.70					45.89 **	13.15				
Low Course Intensity Quintiles	-0.47	6.48					-1.15	6.44				
High Course Intensity Quintile	4.45	5.79					4.55	5.72				
Middle Course Intensity Quintile (reference)												
White Middle Course Intensity (reference)												
White Low Course Intensity		-39.97 ***	6.84		-4.23	6.79			-39.60 ***	6.85		-4.09
White High Course Intensity		31.59 ***	6.93	0.91	6.29	6.29			31.21 ***	6.92	0.81	5.94
AfAm Low Course Intensity		-53.99 *	23.62	9.17	20.86	20.86			-12.16	26.43	47.22 *	22.28
AfAm Middle Course Intensity		-52.43 **	19.92	-14.72	20.49	20.49			-3.08	18.68	34.98	18.70
AfAm High Course Intensity		-16.11	25.36	-3.84	24.59	24.59			46.12 *	22.06	47.82 *	22.63
Latino Low Course Intensity		1.21	28.70	40.11	24.25	24.25			6.58	28.71	44.60	23.98
Latino Middle Course Intensity		4.12	24.56	34.10	23.84	23.84			4.65	24.64	33.99	23.59
Latino High Course Intensity		55.71 ***	13.21	41.69 **	13.22	13.22			55.99 ***	13.21	41.90 **	12.79

**Table 5** continued

		College selectivity (SAT scores)																	
		With HBCU attendees									Without HBCU attendees								
		Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	Beta	p	SE	Beta	p	SE	Beta	p	SE	Beta	p	SE	Beta	p	SE	Beta	p	SE	
Asian Low Course Intensity																			
Asian Middle Course Intensity																			
Asian High Course Intensity																			
Age	-0.52		4.87	-7.45	***	5.25	-0.63	4.89	4.84	-0.71	4.84	-8.06	5.23	-0.70	5.13	50.53	***	13.51	17.65
SES	32.84	***	4.33	53.24	***	4.76	33.09	***	4.32	34.28	***	4.48	54.59	***	4.83	34.52	***	4.40	14.39
Female	-8.73		4.61	-6.96	***	4.81	-8.50	4.58	-8.65	4.62	4.77	-7.84	4.62	4.77	-8.66	4.68			
Tuition/income ratio	-0.68	**	0.21	-0.88	**	0.27	-0.68	**	0.21	-0.67	**	0.21	-0.87	**	0.27	-0.68	**	0.21	0.21
Parental financial support	34.66	***	7.00	36.86	***	7.68	34.59	***	6.98	34.07	***	6.93	35.95	***	7.66	33.97	***	6.89	6.89
Average Grades (GPA)	30.91	***	5.18				30.56	***	5.16	31.00	***	5.15				30.66	***	4.78	4.78
Student SAT	0.21	***	0.02				0.21	***	0.02	0.21	***	0.02				0.21	***	0.02	0.02
Extracurricular Participation	12.26		9.26				10.81		9.11	8.71		8.46				7.43		8.74	8.74
School help with applications	-0.18		2.21				0.10		2.19	0.21		2.17				0.47		2.09	2.09
<i>School characteristics</i>																			
Urban	-7.35		8.54	-3.52		9.10	-6.64		8.52	-6.21		8.20	-2.39		8.74	-5.45		7.32	7.32
Rural	-7.77		6.39	-0.21		7.24	-7.58		6.36	-8.93		6.41	-1.89		7.27	-8.84		5.58	5.58
Western	-10.73		11.66	4.17		11.25	-9.75		11.63	-10.46		11.42	3.35		11.10	-9.96		10.90	10.90
Southern	-32.90	***	8.50	-41.36	***	10.59	-32.80	***	8.54	-31.36	***	8.54	-41.19	***	10.73	-31.71	***	7.85	7.85
Midwest	-1.89		7.45	3.66		8.60	-1.81		7.44	-1.37		7.47	3.82		8.64	-1.65		6.72	6.72
Public School	-18.25	*	9.42	-18.54		10.01	-17.57		9.32	-15.36		9.12	-15.15		9.75	-14.77		8.10	8.10

**Table 5** continued

		College selectivity (SAT scores)											
		With HBCU attendees						Without HBCU attendees					
		Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
		Beta	p	SE	Beta	p	SE	Beta	p	SE	Beta	p	SE
<i>Model fit statistics</i>													
F		37.97		24.33		31.17		35.08		22.47		39.82	
R <sup>2</sup>		0.40		0.28		0.41		0.40		0.27		0.40	
N		2708		2708		2708		2661		2661		2661	

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

**Table 6** Predicted value for different race\*track categories

	College selectivity (SAT scores)			
	With HBCU attendees		Without HBCU attendees	
	Model 2	Model 3	Model 5	Model 6
White low track	1224.61	1165.91		
White middle track (reference)	1264.58	1170.14		
White high track	1296.17	1171.05		
AfAm low track	1210.59	1179.31	1260.95	1215.07
AfAm middle track	1212.15	1155.42	1270.03	1202.82
AfAm high track	1248.46	1169.76	1319.23	1215.66
Latino low track	1265.79	1210.25		
Latino middle track	1268.70	1204.24		
Latino high track	1320.29	1211.83		
Asian low track	1194.10	1149.39		
Asian middle track	1258.06	1172.81		
Asian high track	1356.94	1220.74		

exclude the African-American students who attend HBCUs to determine whether the results are robust to their exclusion.<sup>11</sup>

With those African-American HBCU students excluded as shown in Models 4–6, the results change. Net of other variables, African-American students attend significantly more prestigious institutions than Whites, as shown in Model 4. Model 5 indicates that African-American students on the most elite course of study attend significantly more selective colleges than White students on middle-range courses of study, net of demographic controls. Model 6 reveals that African-American students on the lowest and highest courses of study attend more selective colleges than Whites, while the coefficient for African-American students on the middle course of study just misses statistical significance at the  $p < 0.05$  level, net of demographic and academic background variables. In addition, the relationship between course intensity and institutional prestige does not appear to be linear for African-Americans. Predicted values in Table 6 indicate that the inclusion of the HBCU attendees suppresses the estimates for African-American students: without their data included, the predicted values for African-American students are much closer to those of members of other racial groups.

## Conclusion

Many students spend their high school careers preparing for college admissions. To this end, they select their courses, study hard, and participate in extracurricular activities to maximize their chances of college admittance. For many of these students, the efforts pay off with admission to prestigious four-year colleges and universities. But factors other than

<sup>11</sup> There was also one Latino student who reported attending an HBCU. This student was excluded from the analyses reported in Table 5, Models 4–6.

these efforts come into play in the admissions process for those students who select into four-year colleges and universities. Ascriptive characteristics such as socioeconomic status and race continue to play a role in sorting these students among post-secondary institutions.

In this paper, we examined the interplay between an ascriptive characteristic—race—and a characteristic that is the outcome of both ascription and achievement—high school course of study<sup>12</sup>—in influencing where students end up in the hierarchy of four-year post-secondary institutions. First, we find that there is no significant distinction in prestige of four-year post-secondary institution attended between students who pursue elite academic and less elite courses of study during high school, net of other factors. This distinction is based on the number of Carnegie units the students' courses are worth in high school, as well as the level of the courses themselves, but it does not result in any appreciable impact on the prestige of the four-year colleges attended. It is possible that the impact of course of study plays itself out instead in selection effects, distinguishing between those students who attend four-year colleges and those who attend two-year and non-selective colleges. The work of Alexander et al. (1987) suggests this is the case, but future research needs to incorporate a more rigorous measure of course intensity and statistical controls to solidify their findings.

When considering the impact of race on college prestige, we find some results that are consistent with a redemptive equity model (Hearn 1991), some that are consistent with racialized meritocracy, and very limited results more consistent with a model of persistent inequality (Karen 2002). Briefly, a redemptive equity model predicts that membership in a historically underrepresented minority group will actually work to students' advantage, in that they will attend more prestigious universities than historically more advantaged peers. Our hypotheses regarding persistent inequality predicted that students from racial/ethnic groups that are both historically and currently disadvantaged in the U.S. would also attend less prestigious four-year colleges and universities than Whites. While the historical disadvantage of Asian Americans, Latinos, and African-Americans is clear-cut, we argue that the disadvantaged position no longer characterizes the experience of Asian Americans in the formal educational system. Thus, we expected to find that Asian American students attend more prestigious institutions than Whites: results were consistent with this hypothesis deriving from our adjustment of the persistent inequality model. We find the redemptive equity model to characterize the institutional prestige of those Latino students who go directly to four-year universities and whose college choices are consistently more prestigious than those of White students, net of background and academic variables.

At first glance, no such storyline holds for the African-American students in our sample, however. When considering all African-American students who attend four-year colleges immediately after high school, we found that they attend less prestigious colleges than Whites. But when we consider academic background variables, the storyline changes, as there is no longer a significant difference between African-Americans and Whites in prestige of college attended. Then, we considered the possibility that we were picking up the influence of attendance at historically Black colleges and universities (HBCUs) in these results. While HBCUs have higher retention rates and other benefits

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<sup>12</sup> We also caution against interpreting the results of achievement-related factors as being purely the outcome of individual merit. Prior research has thoroughly established the impact of socioeconomic background, race, and gender on various educational outcomes, including grades, such that these outcomes must be seen as jointly determined and influenced by both individual meritocratic and ascriptive characteristics (Oakes 1985; Mickelson 2001).

for the students who attend them (Berger and Milem 2000; Pascarella et al. 1987) and some may resemble and even surpass other institutions on measures such as faculty pay (Renzulli et al. 2006), most have lower prestige than other institutions. Certainly, the other benefits that accrue to those who attend HBCUs may outweigh the relatively lower prestige scores of these institutions. When we exclude those African-American students who attend HBCUs, we find results that are more consistent with redemptive equity, as African-American students attend more prestigious four-year colleges than Whites, net of other variables.

Consideration of whether high school course-taking patterns have racially-specific effects nuances our story a bit, however, and shows results consistent with both persistent inequality and redemptive equity models. When we interact race and course of study, we find that Asian American and Latino students on the most elite courses of study benefit from this position in a way that White students do not. In fact, the selectivity of college attended for Asian American and Latino students following the most elite courses of study are consistently and significantly higher than those of Whites on the middle courses of study, results that are consistent with persistent inequality and redemptive equity, respectively. At the same time, African-American students with the most academically intensive courses of study do not attend more prestigious four-year colleges than Whites with the middle courses of study: when we exclude those students who attend HBCUs, however, African-Americans see the same advantage of studying on the most rigorous courses of study that Latinos and Asian Americans do: uniquely among African-Americans, however, we find that the students on the lowest course of study also attend more prestigious institutions than Whites on the lowest courses of study.

Here we turn to Blau's racialized meritocracy argument for explanation. It is possible that those African-American students on the lowest courses of study remain persistent in their goals regarding post-secondary education, despite the relatively negative message about their academic capability that the high school sends by having them follow these types of courses of study. This message may blunt the college aspirations of White students on the lowest courses of study in a way that does not occur for African-American students. In other words, African-Americans with the least intensive high school course-taking patterns may benefit from both redemptive equity and racialized meritocracy. There is also some evidence that low-income African-American students may be disproportionately advantaged in elite college admissions, as some institutions recognize the difficulty for many minority students in getting access to advanced high school courses (Alexander et al. 1987; Davies and Guppy 1997; Karen 1991): these low-income African-Americans may also be disproportionately on the lowest courses of study. We may be picking up some of these results here. Unfortunately, our sample sizes are too small to test interactions of race, socioeconomic status, and courses of study together.

In addition, Blau's argument does not explain why White students on elite courses of study realize no benefit in prestige of college attended, net of their grades and SAT scores. The redemptive equity model might explain, in part, why White students on elite courses of study realize no benefit in prestige of four-year college attended, net of their grades and SAT scores, when members of other racial groups do. This model predicts that the benefits for Whites of following the most rigorous courses of study would not be as great as the benefits for African-American and Latino students. It may also be that we are using a socioeconomically advantaged group of White students from the lowest courses of study or it may be that there is a relative shortage of well-prepared students of color applying to colleges, such that the most selective four-year schools recruit those students of color who have followed the most rigorous courses of study.

One limitation is that this study focuses on behavioral outcomes of students, not on the matching process of students and institutions. Unfortunately, the process through which students decide to which colleges to apply and then attend remains poorly understood, although various theories (Blau 2003; Bourdieu 1984) can give us room to speculate as to how student choices are formed and that these processes are specific to various racial groups (McDonough et al. 1997). Bourdieu's (1984) theories suggest that a matching process occurs between a student's social origins and the education that a person attains largely through the way that social origins shape ideas about what is possible. In an individual student's mind, an adjustment of aspirations occurs so that they pursue goals that are achievable: in other words, students form their educational goals, including the prestige of the colleges to which they apply and attend, based on the probability of achieving these goals. Their assessment of the probability of achieving these goals is shaped by their social background, including their socioeconomic class, their course of study during high school, and their race, among other things. To this list we might also add the political climate at the time in which students are applying to colleges. Given the legal challenges to affirmative action and state-level referenda outlawing its use by state universities, it is entirely plausible that changes in the political climate also affect students' decisions about the colleges to which they should apply, although there are varying findings on this point (Brown and Hirschman 2006; Card and Krueger 2005).

The picture of college prestige that we derive is one of promise toward equity: for Latinos, a redemptive equity model seems to hold such that they enter even more highly prestigious institutions than Whites, given that they graduate from high school and choose to continue their education at four-year institutions. For Asian Americans, whose educational performance on other measures has surpassed that of Whites, we find that the prestige of four-year institution attended also exceeds that of Whites, even before any controls are introduced. This does not necessarily mean, however, that this educational performance is uniform across Asian and Latino ethnic groups, as there may be significant differences among them (see Portes and Rumbaut 2001). Unfortunately, the NELS sample is too small to measure this possibility, but future research should consider it. For African-Americans, the picture is somewhat less rosy than it is for Latinos and Asian Americans, but part of this pattern is due to the presence of four-year institutions that have historically served Black interests in ways other than other, more predominantly White, institutions have. One limitation of this study is the relatively small sample sizes of African-American and Latino students, so some caution is warranted in interpreting the results for these groups.

Our study has a few other limitations as well. Geographic proximity to colleges and universities has been shown to be a key factor in influencing college attendance decisions, especially for African-American students who choose to attend HBCUs and low income students (Avery and Hoxby 2003; McDonough et al. 1997). Although we would have liked to include a measure of geographic proximity, there are no relevant data available in NELS. Region of the country is the only proxy that we can use. Furthermore, while we do have some measures of high school characteristics, the focus in this paper was on the individual student. Resources available to college-going students vary widely across schools, however (Perna 2000). Although we do control for the extent to which students use school-based resources in the college application process, future research should also consider the extent to which those resources are available for students. Better data on financial aid would also be welcome. In addition, datasets with larger sample sizes drawn from each school will be better suited to the types of sophisticated multilevel modeling that will be required to handle adequately questions of school effects on students' college-going behaviors.



Nevertheless, our study highlights the need to consider the different educational processes that members of various racial groups experience during high school in forming and shaping their later educational trajectories. Our results must be interpreted in the context of the varying percentages of different racial/ethnic groups who attend four-year colleges directly after high school. In choosing this sample, there is a degree of selection bias in focusing on a relatively elite group of people. Therefore, unless our results are interpreted in context, we run the risk of understating the inequality that exists to channel these particular students into four-year colleges directly following high school, rather than into the workforce, the military, a two-year institution, or some combination thereof. Racially based social forces probably operate to shape these decisions about what type of education to pursue, as well as influencing academic background in subtle ways. In future research, a life course framework with longitudinal data will allow scholars to sort out the interdependencies in these processes.

The policy relevance of our study particularly focuses on high school course-taking. Our results highlight the importance of access to challenging courses of study in high school, particularly for students of color. Although African-American and Latino students attend less selective four-year colleges and universities than Whites do on average, we find that minority students can close this selectivity gap by working hard in school and taking more rigorous coursework. Those students who enroll and succeed in those courses attend more prestigious colleges and universities than Whites in comparably less challenging courses. Extending test preparation to these students and giving opportunities for college visits would also help to expand access to elite colleges and universities, particularly for students who are taking the most challenging courses of study.

In many ways, African-Americans and Whites tend to have access to different curricular resources. African-Americans are less likely than Whites to take higher level courses, but part of this disparity is due to the fact that the schools many blacks attend do not offer the same courses as the schools whites attend. The fact that racial and ethnic minorities have less access to these types of courses (e.g., Southworth and Mickelson 2007; Mickelson 2001) creates a disadvantage for an entire segment of the U.S. population. Furthermore, our research shows a need for schools to inform all students, regardless of their course-taking, of the benefits of attending more selective colleges and to help students connect with those colleges. As appears with the case of Whites, taking rigorous courses alone does not enhance the student's likelihood of attending a more selective college. College counselors can connect students with these colleges and help them use their course of study to open up more college opportunities.

As schools reconsider their admissions policies, our results suggest that students from historically disadvantaged groups are finding their way into more prestigious four-year colleges and universities than Whites, net of other background and academic factors that have historically disadvantaged them. From our results, however, we can gain some insight into one step in the process of creation of social stratification. To the extent that college prestige predicts later student outcomes and generates inequality, the prestige of the colleges that students attend is a crucial step in the generation and maintenance of inequality.

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**Appendix 1: Courses Taken by Students in Each of Three Track Levels: NELS 1988–2000**

Graduation	English	Math	Science	Foreign language	History and social studies	Highest math	Remedial math	Remedial English	APs	Computer science
High track	3.5–3.75	3.0–3.75	2.0–3.0	2.0	2.0	>Algebra 2	No	No	0→>1.0	0–1.0
Middle track	3.0–3.5	2.0–3.5	1.0–2.5	0–2.0	1.0–2.0	Alg 2 and >Alg 2	No	No	0–1.0	0–1.0
Low track	2.0–3.0	1.0–3.0	0.5–2.0	0–2.0	0–2.0	Alg 2 and <Alg 2	Some	Some	0	0–1.0

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