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**WHERE ARE THE BROTHERS?: AN ANALYSIS OF
THE BLACK AND WHITE GENDER GAPS IN COLLEGE ENTRY**

by

BELKIS BIENVENIDA SUAZO-GARCIA

A dissertation submitted to the Graduate Faculty in Sociology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

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ABSTRACT**WHERE ARE THE BROTHERS?: AN ANALYSIS OF THE
BLACK AND WHITE GENDER GAPS IN COLLEGE ENTRY**

by

Belkis Bienvenida Suazo-García

Advisor: Professor Sophia Catsambis

The current study investigates the growing gender disparity in college entry among black students. The central questions are: How do academic preparation, family support, and school support affect the college enrollment of black males and females? What effects do academic disengagement and disposition towards education have on black males' and females' college entry? And, how do the gender patterns found among black students differ from those of white students?

These questions are explored using data drawn from the National Education Longitudinal Study of 1988. The sample consists of 1992 graduates from American high schools whose postsecondary trajectories were measured through 2000. Using quantitative analysis, this study tests five theoretical ideas that emphasize different spheres (academic preparation, family influences, school influences, academic disengagement, and disposition towards education) in which black males may be disadvantaged.

Two central themes emerge from this research. First, regardless of race, males and females differ on how high school and post-high school experiences affect their chances of college entry. More black and white females' go to college because they do

better academically and are more strongly affected by grades and test scores. Later in life, unmarried women are also more likely to go to college. By contrast, black and white males are negatively affected by repeating a grade, inadequate adult support at home and school, and plans to join the military after high school. As a result, more young men enter the labor force after high school, thus reducing their chances of college entry later in their adult lives.

Second, despite these gender similarities across racial groups, black males and females are less able to convert their assets for postsecondary enrollment, perhaps as a result of differences in the environments in which blacks and whites live and learn or discrimination in college admissions.

Taken together, the findings suggest that black males who complete high school are academically engaged but lack the academic preparation and adult support that would otherwise increase their chances of college entry. This study recommends an increase in family and school support to improve the educational future of young men, especially, young black men.

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† Deceased

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CHAPTER 1

THE CRISIS OF BLACK MALES IN POSTSECONDARY ENROLLMENT

Introduction

Social scientists and policy makers have focused a great deal of attention on the black-white academic achievement gap in American schools. Less attention, however, has been given to the growing disparities in the academic outcomes of black males and females. One school outcome in which the “black-black” achievement gap has become most pronounced is enrollment in post-secondary educational institutions, and consequently post-secondary degree attainment (Coleman 2001; NCES 2000; Roach 2001; Slater 1994; Washington and Newman 1991; Yeakey and Bennett 1990). Since the 1970s, most of the growth in higher education enrollment among blacks can be attributed to the significant rise in black women’s college enrollment¹ (Coleman 2001; Slater 1994). As a result a black gender gap has emerged that is much wider than the gender gap across other racial/ethnic groups. The black gender gap in college enrollment raises an important research question: Why are black men’s college enrollment rates substantially below those of black women?

The existing research on minority student achievement offers four theoretical perspectives for explaining the black gender gap in postsecondary enrollment. Researchers explain the black gender gap as a consequence of 1) academic problems that often begin before black students enter high school, 2) a lack of support from parents and schools, 3) oppositional culture that leads to academic disengagement, or 4) future expectations and plans that diminish the role of education as a source for economic

¹ College enrollment and postsecondary enrollment will be used interchangeably and unless specified will refer to both two- and four-year institutions of higher education.

mobility. Although widely considered as key factors in explaining black males' college participation, these arguments have not been tested empirically. Equally important, there is no research that examines whether the factors that affect black males' and females' postsecondary trajectories are similar or distinct from those of white students.

My dissertation tests these arguments by investigating the effects of predisposing factors (academic preparation, parent and school support, academic disengagement, and future educational expectations and plans) on the college enrollment patterns of black and white students of both genders. College enrollment patterns encompass destination at a two- or four- year institution of higher education as well as the timing of enrollment, that is, postsecondary enrollment soon after high school graduation or delayed enrollment several years after high school completion.

To investigate the black and white gender gaps, I draw from the National Educational Longitudinal Study of 1988 (NELS), a nationally representative panel study of eighth graders who attended American middle schools in 1988. NELS followed the *same* students throughout high school and into the 1990s, the period in which the gender gap in college enrollment widened substantially. NELS is an appropriate data set to study the black gender gap because it provides rich information about students' academic achievement, social experiences, and parent, teacher, and peer interactions during high school as well as data on their postsecondary destinations. In addition, NELS participants' projected period of college enrollment coincides with the years in which the black gender gap widened substantially.

How large is the black gender gap? And how does it compare to the black-white gap and male-female gap in college enrollment across other racial/ethnic groups? In the following sections, I explore whether gender differences in higher education are more severe among blacks. I present an overview of the gender distribution in college

enrollment and degree attainment at various levels of higher education. I focus, however, on gender differences in college enrollment at the undergraduate level because this is the first milestone in gaining access to higher education. I offer two reasons why the black gender gap in college enrollment, although growing, has not received as much attention as have black-white differences in educational outcomes. First, I show that among blacks, the expansion in access to higher education is largely explained by black women's higher participation rates and that their progress has overshadowed the decline in black men's college enrollment. Second, I argue that aggregate measures of higher education enrollments have led to the perception that gender gaps in enrollment exist at equal levels across all racial-ethnic groups and levels of higher education. In reality, the black gender gap in college enrollment is larger than that of other racial/ethnic groups and should be a policy concern at the forefront of current research in education.

Blacks' Participation in Higher Education

The black gender gap in college enrollment and degree attainment has been obscured by the great expansion in African American access to higher education (Bowen and Bok 1998; Karen 2002). Specifically, between 1976 and 1999 black higher education enrollments increased by 59.9 percent (NCES 2002, Table 208). During this time, black enrollments at 2 and 4 year colleges rose from 1.03 million to 1.64 million students (NCES 2002, Table 208)². This tremendous growth in black college enrollment occurred at all levels of higher education, leading prominent educators in the black community to describe this trend as "really good news" for blacks in higher education (*Journal of Blacks in Higher Education* 1997).

² Black higher education enrollment did experience a decline in the 1980s (Orfield 1992). It is important to note that despite the 1980s decline, black enrollment remained above its level in the 1970s. Moreover, the increase in black college enrollment in the 1990s has surpassed that of prior decades.

Despite black students' progress in higher education, these numbers also reveal a disturbing trend (Coleman 2001; *Journal of Blacks in Higher Education* 1999; Slater 1994). Data from the U.S. Department of Education show that starting in 1976, when data by race/ethnicity and gender first became available (Slater 1994), black men's higher education enrollment already lagged behind that of black women. Specifically, the data show that in 1976 black males' represented 45.7% and black females 55.3% of black undergraduate enrollment at two- and four-year institutions (NCES 2002, Table 208). Over the next twenty years, the gender difference climbed from a 9.6% gap in 1976 to a 25% gap in 1999. In 1999, black males accounted for 37.3% and black females for 62.3% of black students enrolled at the undergraduate level. These percentages translate into 374,900 fewer black males than females in undergraduate institutions (Slater 1994). In terms of baccalaureate degree attainment, the black gender gap is slightly bigger; black men accounted for 34.3% and black women for 65.7% of degrees conferred in 1999-2000 (NCES 2002, Table 268).

At the post-baccalaureate level, the black gender gap in enrollment persists. More black women than black men are enrolling in graduate programs to pursue master's and first-professional degrees (Slater, 1994). Enrollment data for non-first professional degrees such as medicine and law show that black women have been dominating graduate level enrollment since 1976. In 1999-2000, the majority of master's degrees conferred on blacks were awarded to black women in business, education, and the social sciences (NCES 2002, Table 272). Black women also earned the majority of Ph.D. degrees awarded to blacks in that year. Most of these degrees were in education, psychology and the social sciences (NCES 2002 Tables 274 and 275). This trend is not surprising since many black women continue their post-secondary education to pursue careers in teaching, social service, and health, occupational sectors that historically have provided social mobility for black women. Since these areas continue to be the primary

employment sectors for black women (Bureau of Labor Statistics 2002, Employment and Earnings, Table 10), it makes sense that black women would continue to pursue higher education degrees to enter careers where they perceive the greatest opportunities.

A new trend, however, is the growth in first professional degrees conferred on black women. Until 1988, black men were more likely than black women to earn a first-professional degree. Most recently, in 1999-2000, black women earned 58% of the first-professional degrees awarded to blacks, and since 1988 they have been earning the majority of these degrees in medicine, pharmacy, and law (NCES 2002 Tables 277 and 278).

The trend in higher education enrollment and degree attainment among blacks shows that black males have been lagging behind their female counterparts. This phenomenon is not new. From the 1970s, black males have been losing ground in college enrollment despite the overall rise in black access to higher education. However, the trend is intensifying over time (*Journal of Blacks in Higher Education* 1999; *National Urban League* 2000).

Implications of the Black Gender Gap

The research and policy community has labeled the decline in black men's college attendance as the "ominous gender gap in African-American Higher Education" (*Journal of Blacks in Higher Education* 1999). The National Urban League report on the state of Black America identified the black gender gap in college as one of the social inequalities threatening the future of Black America (*National Urban League* 2000; *New York Times* 2000). Scholars argue that the decline in the pool of college educated black men will have a debilitating effect on communities by reducing the pool of professional men available to marry well-educated female counterparts (Kleinfeld 1998; National

Urban League 2000; Porter 1995; Wilson 1987) and depleting communities of professional adults whose presence has a positive impact on the academic achievement, high school completion, and college attendance of teens, particularly, adolescent minority males (Brooks-Gunn, Duncan, and Aber 1997; Halpern-Felsher, *et al.* 1997; Leventhal and Brooks-Gunn 2000).

Recent data shows that in 2000 there were more black men in jail or prison than enrolled in colleges or universities (Butterfield 2002). This was not the case twenty years ago. While differences in the age distribution of college students and adults in prison prevent a direct comparison of these two groups, these trends expose the reality facing the black community. How will a community be able to nurture its future generations with a declining proportion of college educated men, on the one hand, and a growing population of incarcerated men on the other? What impact will the declining proportion of college educated minority men have on marriageability of college educated women? With low prospects of achieving economic and occupational mobility, how will minority men and their families be able to achieve educational success and inter-generational mobility for their children?

Given the substantial disadvantage that black men experience at every level of higher education and the implications of the black gender gap for the future of the black community, why has this issue not been at the forefront of educational policy in higher education? The limited attention given to the black male crisis in higher education has been due in part to the publication of national data in which trends in higher education have been reported separately by either race/ethnicity or gender. Aggregating gender within race has given an appearance of progress among all blacks. Recent analysis on this issue shows that by disaggregating measures of blacks' participation in higher education by gender, it becomes clear that the rise in black women's participation has outpaced the decline in black men's participation. Similarly, discussions of males' and

females' participation in higher education have been based on measures aggregated across race/ethnicity. As I discuss in the next section, such data do reveal a male disadvantage in higher education, but because they are aggregated across race/ethnicity, gender differences within racial/ethnic groups are hidden--leading many to frame the male crisis in higher education as a phenomenon that affects *all* men equally.

Postsecondary Enrollment Among Men and Women Across Racial/Ethnic Groups

Since 1998, headlines such as "American Colleges Begin to Ask, Where Have the Men Gone?" (Lewin 1998), "On College Campuses It's A Woman's World" (Garofoli 2002), and "Degrees of Separation; Gender Gap Among College Graduates Has Educators Wondering Where the Men Are" (Fletcher 2002) have raised public concern over the gender distribution in postsecondary attendance and degree attainment. The popular press points to a growing body of evidence that shows that fewer men than women are enrolling in college and earning baccalaureate degrees. A few researchers predict that by 2163, if this trend continued, women would earn all baccalaureate degrees conferred in the United States (Mortenson 1998). The predicament is expected to reach the black community much sooner in 2097 (*Journal of Blacks in Higher Education* 1999). This projected extreme inequality has stirred research interest in male students' educational progress and has inspired several studies to assess the impact of the college gender gap on the future leadership of American businesses (Goodman 2002; Sum *et al.* 2003).

Reports from National Center of Education Statistics (the statistical agency for the U.S. Department of Education) partially support the claim that men are falling behind women in college enrollment and degree attainment. An NCES report on national trends in education shows that beginning in 1980 women began to outpace men in

undergraduate enrollment. Between 1980 and 1999 men's undergraduate enrollment increased but at a much lower rate than that of women (13.5 versus 57.5 percent, respectively) (NCES 2002, Table 208). In 1999, men accounted for 43.8% and women for 56.2% of total undergraduate enrollment (NCES 2002, Table 208). The gender distribution is similar for baccalaureate degree attainment (42.8% for men and 57.2% for women).

A female advantage is also present among students pursuing master's degrees. At the master's level, men accounted for 44.3% of total enrollment in 1999 and 42% of degrees conferred in 1999-2000 (NCES 2002, Tables 208 and 272). It is important to note, however, that most of the master's degrees awarded are in education and health, areas which historically have not been pursued by men and consequently have been designated as paths to traditional "pink collar" occupations. This suggests that the gender gap favoring women at the master's degree level hardly supports the notion of a male crisis in higher education because the current trend reflects the historical feminization of these fields, not young men's lack of access to advanced areas of higher education. In fact, the gender disparity in first-professional and doctoral degree programs, areas in higher education that have been traditionally dominated by men, continues to favor men. Recent data show that, although the increase in women's participation has narrowed the gender disparity in first-professional and doctoral degree programs, men accounted for 54.5% of total enrollment in 1999 and 55.3% of degrees conferred 1999-2000 (NCES 2002, Tables 208 and 277; Sum *et al* 2003). In addition, men continue to earn the majority of Ph.D. degrees conferred.

While national data indicate that there is a severe gender gap in higher education, analysis of the gender distribution across levels of higher education shows that the undergraduate level is the only area of higher education in which the longstanding male advantage has reversed to favor women. The disadvantage that men experience at the

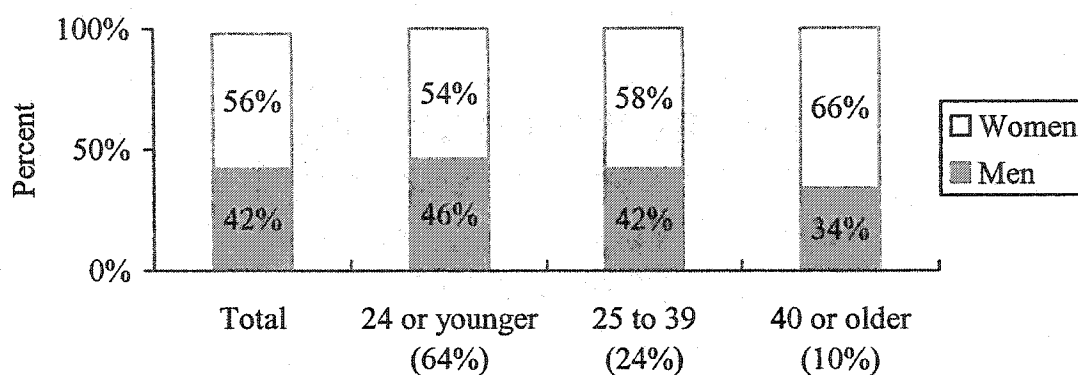
undergraduate level is serious because it has the potential of channeling far more men than women into low paying, blue collar professions, affecting men's economic future and potentially the quality of male-female relationships (Washington and Newman 1991). Because the overall gender gap shows that men are disadvantaged in their initial access to higher education, I focus on undergraduate enrollment and in the following section explore the gender distribution across age and race/ethnicity.

Male-Female Gap in College Enrollment By Age and Race/Ethnicity

Analysis of college enrollment by age and gender shows that the female advantage is substantially higher when all students are considered regardless of age. National data from the U.S. Department of Education, Integrated Postsecondary Education Data System, shows that in 1997 forty-four percent of males compared to 56% of females enrolled in a postsecondary educational institution (King 2000). Figure 1.1 presents a breakdown of this gender distribution by age. It shows that the gender gap is narrower among students 24 years of age and younger but grows considerably among older students. It is important to note that the younger cohort makes up about 64% of the college enrollees. However, the remaining pool of older students (about 34%) increases the overall gender gap because there are far more women than men who enroll in college later in their adult lives. Thus, aggregate indicators of college entry report a larger gender gap in favor of women because older women tend to pursue a college education at a rate higher than their respective men counterparts.

There is no research to date to explain why, given the upgrading of educational credentials for employment (Collins 1979), women are more likely than men to enroll in college later in their adult life. Some suggest that a college education may not be a cost-effective venture for men because men can still earn high wages in traditional male

**Figure 1.1 Distribution of Undergraduates
by Age and Gender: 1997**

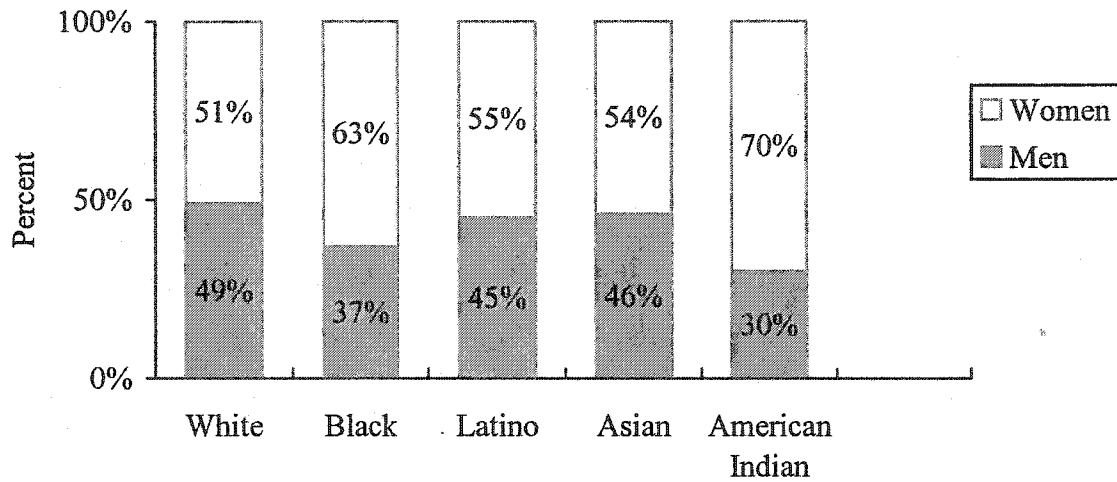


Source: From King, J. 2000. Gender Equity.
Washington, D.C.: Council on American Education

occupations such as manufacturing, construction, and plumbing (King 2000). Women, on the other hand, are more likely to pursue a college education later in life because opportunities for women's social mobility continue to be in fields that require some college education and life-cycle changes, such as reduced childrearing activities, may offer many women more time and independence to devote to a college education. As the technical demands and educational requirements for workers increase, there is some speculation that the gender gap among older students will decline because more men may pursue a postsecondary education (King 2000). While we do not know why older men are less likely than older women to return to school, the gender by age analysis is useful for identifying who goes to college and how age contributes to the female advantage in postsecondary enrollment.

Because the majority of undergraduates are "traditional" students, that is, young students or students who enrolled in college soon after high school graduation, I explore whether the gender distribution in postsecondary enrollment in this younger group is consistent across race/ethnicity. Traditional students are an important population because they are more likely to be well prepared academically and thus have a higher rate of college retention and graduation than those who delay enrollment (Adelman 1999; Berkner *et al.* 1997). From a public policy perspective, it is most beneficial to encourage students to enter postsecondary education early in their lives because college-educated individuals enjoy higher earnings, better health, and an overall a better quality of life than high school graduates (Hossler *et al.* 1999). Society benefits as well from the high economic activity and civic participation often generated by college-educated adults (Hossler *et al.* 1999). King (2000) analyzed this population by gender and race/ethnicity using the National Postsecondary Student Aid Study. Her findings show that the largest gender gap exists among non-white students (see Figure 1.2). Black, Latino, and American Indian males are less likely than their female counterparts to attend an

Figure 1.2. Distribution of Undergraduates Aged 24 or Younger by Gender and Race/Ethnicity: 1995-96



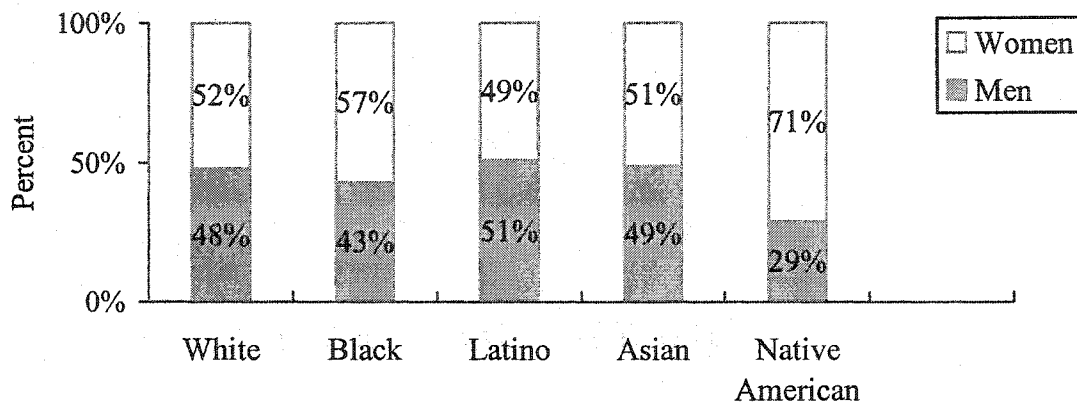
Source: From King, J. 2000. Gender Equity.
Washington, D.C.: Council on American Education

institution of higher education. Asian students also experience a gender gap but the trend is reversed. Asian males are more likely than Asian females to attend college. Among whites, the gender distribution is about equal (49% of them being white males and 51% being white females). These patterns show that while it is true that males are losing ground in college attendance, it is non-Asian minority males who are most at risk of not pursuing a postsecondary education.

Drawing from the National Educational Longitudinal Study of 1988, my analysis of high school graduates shows that non-Asian minority males are the least likely to enroll in a postsecondary educational institution. The sample consists of high school graduates whose postsecondary enrollment status was measured within the first two years after high school completion. Figure 1.3 shows that among these traditional students, the gender disparity is largest among blacks (43% of those who attended postsecondary education were males and 57% were females) and Native Americans (29% of them being males and 71% being females). There is virtually no gender gap among Latinos and Asians. There is a modest gap among whites, 48% of whom are males and 52% are females. My analysis demonstrates that white males are disadvantaged in postsecondary enrollment, black and Native American males experience the greatest disadvantage.

The most common explanation of black males' plight in American schools focuses on cultural factors that stress the role of the matriarchal black family, black peer groups, and black students' anti-achievement attitudes and behaviors (see Noguera 1996). Explanations for black men's low postsecondary enrollment continue in this tradition by focusing on black males' oppositional behaviors exhibited through dropping out of school or, as some believe, through incarceration. There is little attention, however, to the black males who stay in school and graduate from high school. Where do they go? If they are incarcerated, enter the labor force, or join the military, how do these trajectories affect their chances of postsecondary enrollment later in their adult lives? Are their paths

Figure 1.3. Distribution of Postsecondary Enrollment of High School Graduates between 1992 and 1994, by Race/Ethnicity and Gender



Source: NCES, National Educational Longitudinal Study of 1988.

similar to those of white males? Similarly, what are the trajectories of black females who graduated from high school, and how do they differ from those of white females? This study's central questions are: What is it about black males and females' educational trajectories that reduces black males' but protects black females' chances of pursuing a post-secondary education? And, how does the gender pattern found among black students differ from that of white students?

The central inquiry is important given that black males and females do not differ by factors (such as parent education and socioeconomic status, school characteristics, and neighborhood quality) that have been traditionally associated with group-level differences in academic achievement and educational attainment (Blau and Duncan 1967; Lee and Bryk 1989; Sampson 2000; Sewell *et al.* 1970). The homogeneity in black students' background characteristics suggests that differences in black males' and females' educational trajectories are rooted in their academic and social experiences at home and school (López 2003). Unraveling the processes that shape black males' and females' educational trajectories may provide insight into the factors that promote as well as hinder black males' access to higher education and reveal whether the experiences of black males are substantively different from those of white males, and if so, how.

The dissertation is organized into six chapters. Chapter 2 discusses the research on postsecondary enrollment. Specifically, I identify the important correlates of college attendance for all students. The discussion is followed by a review of the literature on black student performance, focusing on the theoretical arguments and empirical findings developed in sociology, anthropology, economics, and psychology to explain racial and gender differences in educational outcomes. This knowledge is useful for developing hypotheses and providing clues for understanding how educational attainment may be occurring among black students, and re-defining the stratification hierarchy in terms of race *and* gender. Chapter 3 describes the analytic samples, variables considered for

analysis, and analytic strategy. This chapter explains that two samples were constructed to analyze gender differences in postsecondary enrollment. The first sample consists of high school graduates. This sample is used to predict postsecondary enrollment within the first two years of high school completion. I refer to this group as the “on-time” enrollees. The “off-time” or “delayed” enrollees constitute the second sample. This sample consists of those graduates who did not enroll in a college within the first two years after high school but who had the potential of enrolling in college several years after high school completion. The data analyses and results of these two samples are presented in three chapters. Chapter 4 examines the gender gap among the “on-time” enrollees across racial groups and investigates the academic and social experiences in high school that help to explain the gender disparity in college enrollment. Chapter 5 completes the analysis of the potential “on-time” enrollees by exploring whether there is an interaction between being a male or female and indicators of academic and social experiences. In other words, what experiences during high school matter for males’ and females’ chances of college attendance? Chapter 6 investigates the delayed enrollment of high school graduates who did not enroll in college soon after high school. This chapter explores whether there is a gender gap among delayed enrollees and what factors during and after high school affect the college enrollment of males and females of both racial groups. The final chapter sums up the study’s findings and explores their implications for the economic futures of black men and black women. This chapter also discusses the policy issues raised by the larger and growing gender gap in college attendance between black men and black women.

CHAPTER 2

EXPLANATIONS OF RACE AND GENDER STRATIFICATION IN POSTSECONDARY ENROLLMENT

In the previous chapter, I showed that although black students' access to postsecondary education has been rising since the 1970s, most of that growth is attributed to black women's higher participation at all levels of postsecondary education. However, the black gender gap has become more severe since the 1990s. While less acute, a similar pattern has emerged between white men and women, favoring white women at the undergraduate level. Current research on postsecondary education has not examined the race by gender disparities in undergraduate enrollment, although college entry is the first step in gaining access to higher education and the first major clue to understanding the larger issue of race by gender disparities in educational attainment. The current study seeks to fill this gap by focusing on initial college entry and developing from the research on black-white school outcomes plausible hypotheses that can be tested empirically using national, longitudinal data.

Determinants of Postsecondary Enrollment

The literature on postsecondary enrollment is dominated by sociological and economic theories on how high school academic and social experiences as well as the labor market affect postsecondary destination. Studies that combine sociological and

econometric approaches (known as hybrid models) present a complex developmental process in which student characteristics and external influences (peers, family, and institutions) interact to affect postsecondary enrollment (Chapman 1984; Hanson and Litten 1982; Hossler and Gallagher 1987; Jackson 1982). Most researchers use these studies as a framework to investigate a research issue with the goal of generating alternative theoretical explanations for the phenomenon in question (Plank and Jordan 2001).

Hybrid models have identified six critical factors and multiple phases that are important in the transition from high school to college enrollment. The critical factors include: (1) student background characteristics (race/ethnicity, gender, and socioeconomic status), (2) student academic preparation and expectations, (3) parental support, (4) extra-familial influences (extra-curricular activities, peers, and teachers), (5) school characteristics, and (6) government and institutional policies on financial aid and recruitment. The models that incorporate these factors are highly detailed (Chapman 1984; Hanson and Litten 1982; Jackson 1982). However, Hossler and Gallagher (1987) have simplified the models into three phases. The first is *predisposition*, a developmental phase that refers to the pre-college period (the high school years) in which students' aspirations and expectations, academic credentials, and home, school, and peer experiences come together to shape students' postsecondary destination, specifically, whether or not to enroll in a postsecondary educational institution. Next is the *search* or data collection phase. During this phase students receive assistance on the college application and financial aid process and information on different types of colleges. Students' tastes and preferences for specific types of colleges are also shaped during this phase (McDonough 1997). The final phase is *choice*. During the choice phase, students select a college by evaluating competing options on the basis, for example, of financial resources, alternative economic options, and college characteristics. Although defined as

three distinct areas, these phases are interconnected. Family and extra-familial support are aspects of both college predisposition and the search phase. Similarly, factors such as financial resources and alternative future plans are components of the choice phase as well as the predisposition phase. Studies that focus on a specific phase measure more thoroughly the key features of that phase.

My dissertation focuses on the predisposition phase because this is when students become oriented towards postsecondary enrollment. And hence, it is the stage in which many students can get disqualified from the “open” contest to gain admissions at a postsecondary educational institution. To develop a theoretical framework for understanding how the predisposition phase affects the postsecondary enrollment of black students and to investigate the under-enrollment of black males in particular, I draw from the theoretical arguments and empirical findings in sociology, anthropology, psychology, and economics that argue how various predisposition factors affect the educational outcomes of minority students. This knowledge is useful for investigating how stratification in educational attainment is emerging within minority groups.

The Academic Preparation of Minority Students

Extensive research has documented that black and Latino students have weaker academic preparation than their white counterparts (Hedges and Nowell 1999; Jencks and Phillips 1998). Notwithstanding the research on the model minority that reveals that the educational outcomes of Asian students are not uniform (Kao 1995), non-Asian minorities³ are consistently more likely to have poor grades and disciplinary problems and less likely to take rigorous academic courses or complete secondary education. Bracketing for a moment how minority students come to be disproportionately

³ Hereafter minority will refer to blacks and Latinos.

represented among poorly performing students, current research indicates that many minority students experience academic difficulties early in their schooling years. These difficulties worsen as they progress into high school (Farkas 1996), where they encounter advanced coursework and are challenged to make use of greater independence in attending classes, programming their schedules, and selecting academic courses (Roderick 2003). These trends are more severe among minority males, particularly black males (Kleinfeld 1998). Black males are more likely than black females and white students to be assigned to low-academic tracks and special education classes, to repeat a grade, and to be suspended from school (Davis and Jordan 1994; Gordon, Gordon, and Nembhard 1994; Hudley and Hall 1997; see also Noguera 1996; Polite 1993). They are also more likely to exit the mathematics pipeline early in the 8th and 9th grades, and consequently are less likely to take advanced mathematics courses (Walker 2001), a strong predictor of college enrollment (Adelman 1999). It follows then that because black males have disproportionately more academic problems that often begin before high school, they are less able than black females to recover academically during the high school years, a critical phase for the development of college predisposition.

There is a great deal of consensus that academic preparation as measured by student academic achievement (Adelman 1999; Bennett and Xie 2001; Carpenter and Fleishman 1987), academic track (Alexander *et al* 1978), and cognitive ability (Tuttle 1981) is a powerful predictor of postsecondary enrollment (see Hossler *et al.* 1989) and college completion (Alexander *et al* 1982). Strong academic preparation can offset the reduced probability of college enrollment that students at-risk face because they come from disadvantaged backgrounds. Research shows that at-risk students are more likely to enroll in a four-year college when they receive a solid academic preparation and strong social support from parents and key influential adults (Horn 1997), although they do remain at-risk throughout their college years. Therefore, the poor academic preparation

of black males coupled with the powerful influence that academic preparation has on postsecondary enrollment strongly suggest that academic preparation may be a causal explanation of why black males are less likely to transition into postsecondary education.

The following section discusses several theoretical frameworks for understanding black student academic and postsecondary outcomes. The theories postulate multiple mechanisms that mitigate the academic preparation of black students and have direct effects on black student postsecondary trajectories. Although these theoretical approaches are interconnected, I discuss their unique contributions to the research on black student outcomes in order to operationalize their important concepts and parcel out their individual contribution to the race by gender problem in postsecondary enrollment.

Bio-deterministic Theory

Researchers have posed several theories for explaining black students' poor school outcomes. One example is the revived bio-deterministic theory (Jensen 1969) articulated in Herrnstein and Murray's (1994) controversial book *The Bell Curve*. Herrnstein and Murray argue that environmental factors, measured narrowly by parents' education and income, account for only one-third of the black-white gap in test scores. They posit that the unexplained variance in the black-white test gap can be attributed to inherited intelligence, and consequently, between group inequalities in education are largely explained by innate intellectual abilities. Thus, the authors question the effectiveness of educational programs such as Head Start and Affirmative Action for eliminating the test score gap across social groups.

Today, few researchers engage this line of inquiry as scholarship worthy of intellectual pursuit. However, because its publication does generate fear that we could be turning back the clock on racial equality, many scholars are compelled to respond. They

have critiqued this perspective on several grounds, most notably the false association between intelligence and biology (Ogbu 1978) and its disregard of the research that shows that environmental factors are strongly correlated with intelligence and scholastic achievement (Spencer *et al.* 2000; Jencks and Phillips 1998). Research has expanded Herrnstein and Murray's definition of environmental factors to include intergenerational transmission of occupational status and educational attainment, parenting practices, school quality, and neighborhood influences. These factors show that the environment can explain about two-thirds of the black-white test score gap after controlling for parents' test scores, a proxy for heritability of intelligence (Jencks and Phillips 1998). Other research argues how genetic characteristics that are not directly linked to cognition such as a person's skin color can affect a student's academic performance as a result of the racial prejudice and discrimination they experience in schools (Jencks and Phillips 1998; Ogbu 1978). Thus, critics of bio-deterministic theory show that the social environment plays a powerful role in shaping the educational outcomes of children and adolescents when defined more broadly to include social, cultural, and psychological variables (Jencks and Phillips 1998).

Parental Influence on Educational Outcomes

Social science research has established that while parents matter a great deal in their children's educational future, not all parents are equally effective in their influence (Lareau 2000). Parents' effectiveness depends on their level of resources across four domains: economic capital (income and wealth), human capital (talents, skills, and knowledge), cultural capital (tastes, preferences, knowledge, language, and behaviors), and social capital (network of relationships). Each form of capital is an important resource for the acquisition of academic credentials (low levels of one form of capital

may inhibit the accumulation of another form of capital, which, in turn, may hinder scholastic achievement). Despite their unique contributions, boundaries among the forms of capital are often unclear. A discussion of the types of capital follows in order to explore the conditions under which parental influence may yield race by gender differences in postsecondary enrollment.

Economic capital refers to the financial resources (income and wealth) that parents use to shape their children's educational trajectory toward postsecondary enrollment. Economic capital can be converted immediately into money or institutionalized in the form of property rights (Bourdieu 1986). High levels of economic capital allow parents to acquire important physical capital (books, computer, extracurricular activities), to live in a good neighborhood, and through their neighborhood, to send their children to high quality public schools or opt out of the public school system and send their children to private schools. Economic capital also offers parents the opportunity to hire tutors, particularly when their children experience academic difficulties, and enrich their children's education through academic or cultural activities outside of school, such as attending academic preparation courses, visiting museums and colleges, and participating in arts, crafts, music, and athletic activities. An important benefit of economic capital is that it transmits across generations a legacy of wealth that gives future generations a head start in the accumulation of economic capital (Oliver and Shapiro 1995). Generally, affluent individuals tend to attain more education than those with less economic capital.

As the above discussion suggests, economic capital is highly associated with the development of human capital. Human capital is a less tangible capital that represents an individual's talents, skills, knowledge, and abilities (Becker 1993). Human capital grows from investments in the development of skills and abilities. These investments are typically in the form of time, money, and delayed gratification in order to acquire

additional education and training. The goal of many parents is to develop the skills, knowledge, and abilities of their children so that their children's human capital can convert into high levels of educational attainment and occupational status. Parents transmit their human capital in practical ways such as assisting their children with school work, course selection, and planning for college attendance.

Cultural capital refers to the norms, values, tastes, preferences, language, and knowledge of high status groups that influence academic success. Cultural capital is specific to an individual's social group (i.e., the economic class to which he or she belongs). Bourdieu (1986) distinguished among three forms of cultural capital. *Embodied* cultural capital is possessed and internalized within an individual; it represents a person's disposition to appreciate and consume cultural goods (*objectified* cultural capital, e.g., books, works of art, and music) that can develop their ability to do well in school and acquire academic credentials (*institutionalized* cultural capital) (Bourdieu 1986). An important aspect to note is that embodied cultural capital develops a person's *habitus*, one's disposition to take action based on one's knowledge of the social structure and experiences of what is possible within it. Embodied cultural capital develops early in a child's life. Parents must invest time to instill in their sons and daughters the habits, styles, and behaviors that would predispose their children to learn and do well in school, to pursue a college education, and to persevere through college completion. Earning a college degree is both a symbol of "cultural competence" and a commodity that can be exchanged in the labor market for income and occupational prestige (Bourdieu 1986; Collins 1979).

Building on Bourdieu's framework of social capital, Coleman (1988) defines social capital as a public resource that serves to enforce desirable social norms and sanctions within families and communities. Social capital builds from a pattern of relations among adults within a family or community. Social capital within a family

refers to the number of adults and the activities in which they and the children in the family are engaged. Social capital within a community refers to relational ties among adults living in a neighborhood or participating in a functional community such as a school or church. For social capital to be productive at the community level, parents should know directly or indirectly other parents in the school. The network should possess intergenerational ties, that is, parents should know their children's friends as well as the friends' parents. Through a network of social relations, social capital enables parents and schools to work together to enforce acceptable academic and social behaviors among students in order to produce academic excellence.

These four forms of capital are interrelated. Families with high economic capital are likely to possess high levels of the other forms of capital. In this sense, economic capital is at the root of human capital, cultural capital, and social capital; however, these three forms of capital cannot be reduced to purely economic terms (Bourdieu 1986). Each form of capital allows parents to mobilize resources for their children beyond what their economic capital would suggest. For example, a poor parent may be able to cultivate their child's disposition towards college education by enrolling the child in academic enrichment programs or discussing academic matters. These benefits may be derived from educational or work experiences or from the information shared within a network of parents and teachers.

The effectiveness of parental capital⁴ on adolescents' academic success, particularly in terms of college attendance, depends on the level of resources that parents have to pass down to their adolescents; however, equal levels of parental capital does not achieve equal levels of effectiveness on student school outcomes across race and ethnic groups (Kerckhoff and Campbell 1977; Portes and Wilson 1976). Status attainment

⁴Parental capital refers to parents' economic, human, cultural, and social capital.

theorists have shown that there is a strong relationship between parental socioeconomic status (namely, economic capital and human capital) and student academic performance and educational attainment (Portes and Wilson 1970; Sewell *et al.* 1969). Socioeconomic status (SES) is a composite measure of parental income, occupational prestige, and parent level of education. Status attainment models are defined by several sequential stages that link the effect of parent socioeconomic status on educational outcomes through student mental ability, academic performance, significant others' expectations, and student school experiences and expectations (Kerckhoff and Campbell 1977). The models are more predictive of white students' than of black students' educational attainment. Specifically, the effect of SES is much weaker for blacks than for whites (Portes and Wilson 1976). Attention to the structural inequalities in American society offers insights as to why parent economic and human capital yields weaker effects on the school outcomes of black students compared to those of white students.

Prior to the Civil Rights Act of 1964 and the Supreme Court's landmark decision *Brown v. Board of Education* (1954), black Americans faced insurmountable barriers in the work place and in education. Although many of the structural barriers to racial equality, particularly in education, have been removed, many black families continue to face a myriad of social problems that compromises the educational future of their children. One serious problem is the level of poverty in the black community; one in every three black children lives in a poverty-stricken household (Canoy 1994). In addition to poverty, many black children live in female-headed families. Wilson (2003) estimates that six out of every ten black families are single-parent households. Poverty and the absence of fathers are of great concern because these factors have been associated with the poor school outcomes and weak parental control of adolescents, especially males (Dornbusch *et al* 1985; Rodney and Mupier 1999). Scholars argue that poverty and single-parent families deprive children of economic capital and weakens the social

support and cultural interactions that might have been available in two-parent households (McLanahan and Sandefur 1994).

Other social scientists provide evidence against the “pathology of matriarchy” that argues that father’s absence in the home is detrimental to boys. Using four national datasets covering four decades (1960, 1970, 1980, and 1990), Biblarz and Raftery (1999) show that children of single mothers have lower average socioeconomic success in terms of employment and occupational status than children from other family structures. The effect of living in single-mother families on children’s educational and occupational attainment is negative but small and is explained by mothers’ status in the labor market. In the 1960s and 1970s, the negative effect operated via mothers’ non-employment; in the 1980s and 1990s mothers’ low-occupational positions, rather than being employed or unemployed, accounted for children’s status attainments. Moreover, Biblarz and Raftery show that family size can offset the single-parent effect. Fewer children in single-mother homes than in two-parent families can be an advantage for single-parent families because sibling size is negatively associated with children’s attainment. Thus, this body of research suggests that the effect of single-mother families on children’s educational and occupational attainments may be a function of financial hardships that are reduced when single parents have few children, are attached to the labor force attachment, and have high occupational position.

The findings dovetail with the work of Battle (1998). Based on data from the National Education and Longitudinal Study of 1988, Battle shows that controlling for family size the effect of family structure on black adolescents’ mathematics and reading achievement operates through parent socioeconomic status (SES). At low levels of SES, black adolescents from single-parent households outperform their low-SES peers in dual-parent homes, presumably because in dual-parent households there is a strong likelihood that financial stress between two adults would generate a great deal of conflict. At the

mean level of SES, there is no significant difference in the academic performance of teens from single- or dual-parent families. As expected, at high levels of SES, adolescents from dual-parent families outperform their peers in single-parent families perhaps because dual-parent households are more likely to provide double the resources to their children, in the form of human, cultural, and social capital. These findings show that a family's economic status and the benefits derived from such status may be more important than family structure in understanding children's school outcomes. Alternatively, other research argues that the black family structure is only deviant when compared to the nuclear family norm of white families. Black families often consist of an extended kinship network that historically has been influential in overcoming adverse conditions and discrimination in American society (see Gordon *et al.* 1994).

Although economically better off, middle-class black families also face challenges in educating their children. First, middle-class black families earn less than their white counterparts even after holding constant education. For example, in 2003 the median income for black families was 62 percent that of white families (\$34,369 compared to \$55,768) (U.S. Census Bureau 2003, Table FINC-01). In the same year, the median income for black families with a college educated primary caregiver (that is, a householder with a bachelor's degree) was \$64,920 compared with \$83,169 for their respective white counterparts (U.S. Census Bureau 2003, Table FINC-01). Second, the black middle-class is a relatively recent generation of professionals in their community that tends to work in non-lucrative professional occupations that fall in areas such as education, nursing, and social service (Patillo-McCoy 2000; Wilson and Allen 1987). This means that the economic, human, cultural, and social capital of black parents are recent acquisitions which are not likely to represent the full range of knowledge, dispositions, and tastes that have been passed down for multiple generations to middle- and upper-class white children and which are so important for educational success

(DiMaggio 1982; Kalmijn and Kraaykamp 1996). Third, residential segregation forces many of the black middle class to live in close proximity to poor black communities, thus rendering the black middle class vulnerable to many of the social ills afflicting poor and black neighborhoods (Patillo-McCoy 2000). These three conditions indicate that at every level of parental capital black parents may be less effective than whites in developing their sons' and their daughters' college predisposition, not because black parents care less for their children, but because on average, the quality and the quantity of black parent capital may not be sufficient to propel their children to high levels of educational success. To close the black-white gap in education, researchers predict that several generations of college-educated blacks may be needed to transmit to black children and adolescents the full benefits of being born into middle- or upper-class families (Phillips *et al.* 1998).

Notwithstanding the evidence that black families have weaker levels of parental capital than their white counterparts, is black parental capital distributed unequally to boys and girls? If so, what effect does the unequal distribution of parental capital have on black males' and females' postsecondary destinations? Many of the studies on educational outcomes have investigated gender differences in parenting practices among white students or across racial and ethnic groups by measuring gender as an aggregate measure of all boys and all girls (Washington and Newman 1991). This pattern of analysis has limited our understanding of black parents' child-rearing practices, specifically, whether or not they are gender specific or generate gender-specific outcomes. The few studies on black parenting practices argue that there is either an egalitarian culture of parenting in which few gender differences exist or a gender-based culture in which boys and girls are treated differently (Washington and Newman 1991). The latter studies reveal that during infancy and early childhood black girls are nurtured more; they spend more time with their mothers, are touched more, and are disciplined less severely than the black boys (Young 1970). In contrast, black boys are encouraged

to develop more autonomy and independence, presumably to prepare them for masculine roles such as competitors and breadwinners (Young 1970). These gendered child-rearing practices appear to change during adolescence. Research on adolescents show that black mothers are more strict and have higher expectations for their daughters than their sons (Lewis 1975); black mothers also expect more responsibility from their daughters than their sons (Kunkel and Kennard 1971). These gender disparities are confirmed by adult black women who recall that while growing up their mothers gave their brothers more freedom and preferential treatment, and that essentially their brothers were “raised in a different way” (Reid 1972).

The switch from nurturing the development of black girls to providing greater structure, discipline, and responsibility may reflect the challenges that many mothers face as a result of being single parents. Black parents’ gender-specific practices may reflect a sense of responsibility for teaching the same-sex child’s future role in society. This sense of responsibility may be borne out of their experiences and familiarity with the opportunities and structural constraints of being an adult of a particular sex (see Washington and Newman 1991). Perhaps mothers are preparing their daughters to be economically self-sufficient and independent in the event they become single parents—an experience shared by many black mothers in contemporary America. The concern, however, is that since black fathers are less likely to be in the home black males may not receive sufficient academic support, discipline, and controls at home to help them navigate the multiple challenges that black males face in American society.

Recent studies of race and gender disparities in education support the claim that black males and females are socialized differently in the home. López’ (2003) ethnographic study of young adult black men and women of Caribbean descent examines how family experiences shape their *habitus*, specifically, their outlook or disposition towards education. These young adults come from poor, female-headed households.

The findings show that the young women experience more restrictions on their behavior and more structure at home than the young men. As a result, the daughters have more frequent interactions with family members and often serve as institutional brokers for family members who need assistance, for example, with interpreting correspondences from government agencies. These experiences lead the young women to develop a “dual frame of reference” that compares their future hopes and aspirations to the realities of their mothers’ life experiences. The young women develop high educational aspirations and view education as a means for avoiding “the trappings of their mother’s lives”.

In contrast, the young men have few household responsibilities and experience more freedom and less supervision. They spend most of their time hanging out with their peers, dating girls, and working. Their sense of masculinity is not derived from a role of authority in the home, but rather is formed by their personal interactions with their male peers. In addition, they have ambivalent views towards education because they experience their social world (e.g., negative interactions with police and school personnel) as members of a stigmatized group (so do the women but to a lesser extent).

The home experiences of these men and women reveal that family involvement and household responsibilities may protect girls from the negative influences outside the home and provide them with additional opportunities to acquire a broader social network of adults. These experiences pass down parents’ cultural capital to produce a strong disposition towards education among young women and cultivate daughters’ “sense of competency and efficacy in the outside world” (López 2003:117). Unfortunately, the young men are at a serious disadvantage because in addition to the negative experiences outside the home, they do not receive adequate guidance and supervision from their parents. These gender patterns give credence to a common saying in the black community: “Black mothers raise their daughters but love their sons”. This gender

disparity in socialization may contribute to the poor outcomes of black males in education and other facets of life.

MacLoed's (1995) ethnographic study of two groups of poor young men (the black Brothers and white Hallway Hangers) supports López' findings that social support or adult sponsorship helps instill middle-class cultural capital by conveying high educational expectations. In contrast to López' research, MacLoed shows that black males are able to receive positive adult sponsorship in terms of educational expectations from their parents. For instance, the black Brothers held high educational aspirations and mainstream views on the importance of education. Through education, the black Brothers hoped to get well-paying jobs that would allow them to acquire the material goods that symbolize success, such as a car and a house. In contrast, the white Hallway Hangers did not consider education an important resource for finding a well-paying job or becoming successful later in life. In contrast to the black Brothers, the white Hallway Hangers were entirely disengaged from the educational process and held strong oppositional attitudes towards teachers and learning.

The follow-up study, eight years after the first interviews, reveals that neither group experienced long-term success in the labor market. Despite high expectations and some postsecondary training, many of the black Brothers did not find well paying, stable employment. An important aspect to note is that the black Brothers were somewhat more successful than the white Hallway Hangers in that all black Brothers graduated from high school and some enrolled in a postsecondary educational institution. The black Brothers reached this level of success because they grew up with strong parental cultural capital. According to MacLoed, the black "Brothers' parents wielded a substantial degree of authority, both in the present and in shaping their children's educational and occupational aspirations" (59). Thus, the black Brothers' lack of occupational success was not due to poor family support, but rather to limited opportunities, exploitation, and poor treatment

in the labor market. By contrast, the white Hallway Hangers received no parental support because their mothers felt that it was appropriate to withhold high aspirations for fear that unrealistic expectations and goals would result in disappointment. Given the lack of school and family connection, it is no surprise that the white Hallway Hangers spent most of the eight years in and out of prison for crimes that included illicit drug activities, theft, and serious violence. Without a viable, social network of adults (parents or teachers) who could provide support and guidance, the white Hallway Hangers were doomed for failure.

An ethnographic study of six adolescent black girls living in a poor, urban neighborhood also reveals that strong parental cultural capital and social capital are instrumental in converting educational aspirations into “realistic mobility orientations” (O’Connor 2000:107). All the black girls came from female-headed households in which none of the mothers had graduated from high school and only one had received a GED diploma. Only two of the six girls have a strong likelihood of completing high school in good academic standing and of pursuing a college education. In contrast to the other four girls in the study, Cher’s and Sabrina’s odds of educational success are high because they received middle-class cultural and social capital from their families. The mothers permitted their daughters to receive supplementary academic instruction from relatives and facilitated discussions about college attendance with family members. Because this process began early in the girls’ lives, it enabled the girls to express the cultural capital that would attract other adults for support (O’Connor 2000:124; Turner 1960). Consequently, they were able to connect with teachers who “took the time” to work with the girls and praise their talents. In the end, the girls who received weak or ambiguous emotional support from their mothers (and teachers) continued to perform poorly in school. Moreover, the lack of adult sponsorship meant that these girls would probably go through their remaining years in high school without the knowledge, information, and

strategies that build the confidence needed to feel that they can achieve their goals and the educational efficacy to facilitate the necessary actions towards educational success and attainment (O'Connor 2000). Why did some girls receive parental sponsorship and while others did not? O'Connor indicates that parental sponsorship occurs by chance, that is, birth into families with middle-class cultural capital.

Taken together, the research shows that black families are challenged because they have less economic, human, cultural, and social capital to achieve the same level of academic success for their children as that achieved by white parents. Nevertheless, girls appear to be doing better than their black male peers, although not as well as white students. One argument suggests that unequal distribution of parental capital to sons and daughter explain differences in black males' and females' rates of college entry. Alternatively, MacLoed's and O'Connor's studies indicate that the black parents may pass on their capital, particularly, their cultural capital equally to their sons and daughters. However, because black males experience more academic and behavioral difficulties as well as structural constraints (i.e., discrimination) than black females, black males may require more of the same support that black females receive as well as additional support that black females may not receive in order achieve the same level of attainment as black females.

How Schools Generate Educational Inequalities

Another explanation of racial differences in education is centered around schools as arenas that produce and maintain educational inequalities. We have learned from national surveys and other data that black children enter school with cognitive skills that are significantly below those of white children (Lee and Burkam 2002; Phillips, Crouse, and Ralph 1998). Even more troubling is the finding that these racial differences persist

and widen throughout their schooling years (Farkas 2003; Phillips, Crouse, and Ralph 1998). Some researchers contend that the racial gap in later school outcomes is a result of racial differences in home environments that in turn affect the level of cognitive skills that children have at school entry, over which schools have no influence. In contrast, many sociologists and other social scientists have shown that home disadvantage and prior racial disparities in academic skills do not explain fully subsequent racial differences in school outcomes (Jencks and Phillips 1998) nor the widening race by gender gap among black students. Because schools are the primary institutions charged with the mandate of educating children, many social scientists focus on how school resources including teacher-student interactions create different academic experiences for black males and females.

In his review of the research on racial disparities in education, Farkas (2003) identifies three conditions that must be satisfied to ensure that students learn and reach their fullest educational potential. First, there must be opportunities to learn. Learning opportunities include all the resources (e.g. teachers, text books, and instructional practices) that a school utilizes in the learning process. Second, students must exert effort in order for learning to occur. Effort refers to student time on tasks and the quality of the concentration that students devote to their academic endeavors. Certainly, student effort is not independent from a school's learning opportunities. Good schools encourage academic engagement by providing highly skilled teachers and a wide range of instructional and extracurricular activities that support students' academic development and path towards a postsecondary education (McDonough 1997). The third condition is that in order to master new instructional tasks students must acquire the prerequisite cognitive skills. Difficulties in raising a student's skill level are compounded by inadequate school resources, stigmatization of poor performing students, and cultural clashes between the values, habits, behaviors, and styles promoted by schools and those

poor schools, the opportunities to fully develop their predisposition towards college are more limited than those of their respective white peers. Since black males experience more academic difficulties and harsher disciplinary sanctions than black females, black males may feel stigmatized and thus may be more sensitive to their teachers' perceptions and expectations (Noguera 2003b).

For some time, scholars have argued that school personnel, mostly through teachers, function as gatekeepers by sorting students into different learning opportunities that prepare students--beyond the academic content--to the norms, values, habits, and styles that correspond to specific adult roles and statuses in society (Bowles and Gintis 1976). This conditioning occurs through a "hidden curriculum" that differentiates schools and students within schools by "opportunities to learn", such as the types of courses offered, academic ability placements, and the types and quality of the information shared by teachers (Oakes 1985). Prior to the 1980s, this sorting practice occurred through formal tracking in which schools assigned students to an ability track from which students selected courses. The current system for sorting students creates an informal tracking system in which students select their own courses, typically of similar difficulty levels, and by doing so their choices--not the school--prepare them for different postsecondary trajectories (Lucas 1999). Under this new system, poor and minority students are not likely to receive from their teachers or counselors the necessary guidance to determine the right courses to take, the steps to follow for college enrollment, and the criteria they should follow for selecting a college. This is the case because black students are more likely to attend poor and racially segregated schools (Orfield *et al.* 1997) with fewer academic resources and certified teachers (Oakes 1985). Consequently, these poor and predominantly black high schools tend to be overcrowded, thus limiting the amount of time teachers and counselors dedicate to academic development and college planning (O'Connor 2000). In these schools, teachers and counselors begin the college process

late in the eleventh or twelfth grade, leaving students with virtually no time to improve their academic transcript for college enrollment. As a result, many black students, and black males in particular, go through the predisposition phase not knowing what courses offer the best preparation for college enrollment or what steps to take to begin and complete the college application process (McDonough 1997).

In contrast, affluent and white students are more likely to receive this intellectual or human capital from their parents or family members who are more likely than poor and black parents to have experiences with higher education. Moreover, teachers and counselors tend to reflect the cultural capital of its student population. In a qualitative study of low- and high-SES, McDonough (1997) observe that the culture of high-SES schools, as practiced by teachers and counselors, reflected what parents wanted for their adolescents, that is, school personnel shaped students' perceptions of the higher education opportunity structure and tastes for specific types of colleges. Thus, school personnel complimented parents' educational expectations for their adolescents' future.

School personnel (namely, teachers and counselors) may have profound effects on black males' educational trajectory as shown by black males' high rates of negative academic and behavioral experiences in schools compared to those of black females and white students (Polite and Davis 1999). Poor school outcomes among black males may be a result of an alienating learning environment in which black students are required to decipher an academic curriculum that draws from the substantive knowledge and language skills of middle- or upper- class culture. Poor and minority students are not taught this cultural base but are expected to already possess this knowledge and draw from it for mastering coursework. Bourdieu and Passeron (1977) termed this process "symbolic violence", a phenomenon that is often "misrecognized" by teachers, parents,

and students. For example, the disproportionate placement of Asian and white students (who generally have high levels of high-status cultural capital) into gifted and talented courses is seen by many as a reflection of the innate intellectual ability that these children possess or the great effort they exert. In contrast, black males receive more school suspensions and expulsions without regard to the consequences that such disciplinary practices have on their academic future and overall welfare (Gordon *et al* 1994; Ferguson 2001a; Noguera 2003b). Black males are also more likely to be placed in remedial education and held back a grade than black females, white males, and white females. The disproportionate number of black males in low ability courses and with poor disciplinary records reifies racial stereotypes of black inferiority found in the larger society, particularly the notion that blacks are not very smart, do not work very hard, and are violent people (Noguera 2003b). Black students, but black males in particular, may internalize these negative stereotypes and come to view education as incompatible with their racial identity (Comer 1997). While not all black males respond to their educational difficulties through academic disengagement (Noguera 2003b), some may dedicate less effort and disidentify entirely from the academic process (Fordham 1996; Ogbu 1978).

Teacher expectations is an important factor because it may generate race by gender differences in black students' college predisposition. Although teacher expectations do affect student academic achievement, research has not reached a consensus on whether such expectations are biased (Ferguson 1998). On this issue, Ferguson concludes that teachers' expectations "probably do help to sustain and perhaps expand" racial differences in academic outcomes. There is evidence, however, of a "self-fulfilling prophecy" in which teachers' initial assessment of students' academic potential is correlated with their achievement measured at a later time (Brophy 1985; Ferguson 2003). In addition, the research shows that black students are more sensitive than other students to teachers' beliefs and expectations. In a study of 537 black, Asian, and white

seniors attending an academic magnet high school in California, black students were least likely to report that “My teacher supports me and cares about my success in their class” (Noguera 2003b). In a study of eighth graders, Casteel (1997) asked students whom they want to please more. More black than white students reported their teachers, and black females, in particular, had the highest report followed by black males. In contrast, white students reported pleasing their parents as more important. These patterns are also supported by scholars who suggest that teacher support and encouragement are very important for the academic success of black students (Ladson-Billings 1994; O’Connor 2000).

Stanton-Salazar (1997) also argues that students obtain useful social capital in schools through their interactions with teachers and other school personnel. Despite limited parental social capital, poor and minority students are able to extend their network of influential adults through the institutional ties they develop at school. Those students in good academic standing or who participate in special enrichment programs are better able to expand their adult social network and thus increase adult sponsorship for academic success (Stanton-Salazar and Dornbusch 1995). Black students whose college aspirations are reinforced both at home and at school are better able to transform their aspirations into concrete expectations (O’Connor 2000). Therefore, black males may have weak school social capital because they tend to experience negative interactions with teachers regarding academic performance and behavior (Ferguson 1998). By contrast, teachers may determine that black girls will have the best chances of academic success, and thus may dedicate the limited resources to the educational advancement of black girls (Rist 1970).

The research suggests that the schools that black students attend are likely to reflect the economic, social, and cultural capital of the student body. These low-SES schools may lack opportunities for black students to improve academically and become

prepare for college enrollment (McDonough 1997). The research also shows that students are affected by their teachers expectations, but black students in particular are more sensitive to teachers' support and encouragement (Casteel 1997; Ferguson 1998). Given that black males tend to earn lower grades and experience more behavioral problems than other students, attending a disadvantaged school may reduce black males' chances of going to college more so than those of their black female counterparts. Compared to black females, black males may be more sensitive to teacher expectations because, given their academic standing, black males may seek positive teacher interactions that invalidate racial stereotypes (Steele and Aronson 1998).

Peer influence: The Process of Academic Disengagement

Research on peer influence is generally divided into two areas: contextual and proximate peer influence. Studies on contextual peer effects investigate the influence that schools' racial and socioeconomic composition has on educational outcomes. The focus is on the academic and social climate that schools promote via their social composition. Proximate peer influence compares students' and their peers' attitudes and behaviors and determines whether or not peer groups have positive or negative effects on school outcomes (Hallinan 1983: 219-224). Studies on peer influence and postsecondary enrollment fall within the latter category. The general proposition is that peers who share similar attitudes and behaviors experience similar trajectories.

The literature on peer influence reveals that students benefit from having peers who are academically oriented and plan to pursue a college education (Hallinan 1982; Kao 2001). Peer encouragement has a positive effect on postsecondary enrollment, however the association is not as strong as socioeconomic status and academic achievement (Hossler and Stage 1987). Specifically, students who have friends with

college plans are more likely to have a strong predisposition for college attendance (Alvin and Atto 1977; Carpenter and Fleishman 1987; Falsey and Heyns 1984). In a study of 9th graders, Hossler and associates (1999) found that college-bound students were more likely to plan to go to college if they had friends who also had college plans. Similarly, other studies report that the probability of college enrollment increases with on-going contacts with college-bound peers (Falsey and Heyns 1984).

Scholars contend that race and gender are important attributes that shape differences in the types of peers a student chooses (Brantlinger 1993; Clark 1989). Studies that examine racial differences in education focus primarily on how race, as a socio-historical and cultural phenomenon, might affect the types of norms, values, and behaviors that a specific peer group adopts and, in turn, how differences in peer groups affect racial differences in education. The role of gender is rarely explored despite the growing evidence that racial differences in educational outcomes are stratified by gender (López 2003; Riordan 2003; Washington and Newman 1991)

The cultural opposition framework (Ogbu and Simmons 1998) is one of the most cited and accepted argument of peer influence on racial disparities in education and, by extension, on race by gender differences in college attendance (Slater 1994). This framework evolved during two phases. In the first phase, Ogbu (1978) focused on differences in educational outcomes between *involuntary* or *castelike* minorities and the dominant group of a given society. Involuntary minorities are defined as racial/ethnic minorities whose mode of incorporation into American society was through enslavement, colonization, or conquest. Their status is in contrast to voluntary minorities (e.g., Chinese, Koreans, and Caribbeans) who migrated to the United States voluntarily and autonomous minorities (e.g., Jews and Mormons) who are small in number, but whose relation to the dominant group is not categorized by strict hierarchy. During this phase of his work, Ogbu placed great emphasis on how societal structural barriers in the form of

systematic institutional discrimination communicate to involuntary or caste minorities their inferior position in society. Oppressive societies achieve institutional discrimination through the poor schooling of involuntary minorities, and consequently, restrictive mobility in the occupational opportunity structure.

The second phase of Ogbu's framework focuses on communities' responses to social and cultural conditions that influence the incorporation of involuntary minorities into American society (Ogbu and Simmons 1998). The work of Ogbu and associates stresses the importance of peers on the academic engagement and schooling predisposition of historically disadvantaged involuntary minorities (Ogbu and Simons 1998; Fordham and Ogbu 1986). This perspective argues that disparities in black-white academic performance are a result of black students' resistance to educational goals (Fordham 1996; Fordham and Ogbu 1986). Emergence of an anti-academic culture results from black students' reaction to the occupational barriers and poor educational returns that they expect to experience due to their history as a racially oppressed and stigmatized group (Ogbu 1978). This resistance is transmitted through a peer culture that views academic effort and achievement as "acting white," and "acting white" as a rejection of black culture and pride (Fordham and Ogbu 1986). Failure to adhere to the "fictive" kinship peer group renders black students vulnerable to negative peer sanctions (Fordham 1996). Black students can protect themselves from negative peer sanctions by adhering to the peer group's norms and values, rejecting entirely their association with their race, i.e., other black students, or participating in activities that would gain them popularity among their black peer group while at the same time doing well in school. The underlying assumption in how black students respond or negotiate their peer group is that all black students face the *same* peer group culture and that to do well a black student must assumed a "raceless" persona (Fordham 1988; Fordham 1996). Accordingly, Ogbu and associates (Fordham 1996; Fordham and Ogbu 1986) argue that the black peer

culture explain racial differences in educational outcomes. However, Fordham (1996) found that doing well in school and maintaining acceptance from the “fictive” kinship community of black students was more problematic for black adolescent boys than for girls. But neither Fordham nor Ogbu explores this gender phenomenon. Why would peer interactions be more problematic for the educational future of black males, if folk theories on making it instill on black males and females alike, “concrete” ideologies on the mismatch between the academic credentials and occupational mobility of members of their social group (Michelson 1990)?

The “acting white” hypothesis is hotly contested. Some studies, mostly qualitative and disproportionately produced by Ogbu and associates, find evidence of the oppositional theory (Fordham 1998; Fordham and Ogbu 1986; Solomon 1992; Ogbu and Simons 1998). In contrast, a growing body of research documents that racial identity may not be the sole or primary unifying force among black students and thus, an oppositional outlook towards education is not representative of most black students. Several ethnographic studies report that blacks have multiple social identities from which they interpret their social world (Carter 2003; O’Connor 1999 & 2000). In a study of black males and females from an urban high school, O’Connor (1999) concludes that the variability in student accounts “points to the limitations of relying on a single social identity, such as race, as a way of understanding the determinants of academic engagement and performance” (143). Moreover, studies acknowledge that there is diversity in the friendships that black students form, from friends with whom black students can share academic success to peers with whom black students must “camouflage” or downplay achievements to protect against negative peer sanctions (Horvat and Lewis 2003).

In addition to ethnographic studies, quantitative studies consistently dispute the presence of an uniform, anti-academic peer culture that disproportionately lowers black

students' educational performance compared to their respective white peers (Ainsworth-Darnell and Downey 1998; Cook and Ludwig 1998; Downey and Ainsworth-Darnell 2002; Ferguson 2001b). Cook and Ludwig (1998) were the first to test the oppositional theory using survey data. Using the National Educational Longitudinal Study (NELS), they investigated the oppositional outcomes of black, Latino, and white 10th graders in 1990 and their effects on educational achievement. The authors explored the following three questions: "(1) do blacks experience greater alienation toward school than non-Hispanic whites?; (2) do blacks incur social penalties from their peers for succeeding academically?; and if so, are these "achievement penalties" greater than those for whites?" (256). Their findings reveal that blacks are not more likely than other groups to experience alienation in school by their peers. Moreover, black students are as likely as white to join supportive peer groups. Cook and Ludwig comment that these findings do not contradict the claim that blacks are badgered if perceived by their peers as acting white. What this finding does show, however, is that this form of taunting does not appear to have severe negative effects on academic achievement and that the benefits of academic placement among high achieving students more than compensate for the badgering that they may experience. Finally, the authors explore whether blacks under-report their alienation or misrepresent their schooling disposition. Cook and Ludwig found no difference between black self-reports and official school records on attendance. This finding disputes the claim that black students misrepresent their schooling experience to researchers as well as boosts confidence that survey data captures the lived experiences of black students⁵.

⁵ Downey and Ainsworth-Darnell (2002) conducted similar analysis using NELS and NAEP data and found that black students' reports of academic effort and engagement fall within their expected distribution among white, Asian, and Latino students and parallel black students' academic position relative to these other groups.

More recent quantitative analyses on NELS and the National Assessment of Educational Progress also contradict the “acting white” thesis (Ainsworth-Darnell and Downey 1998; Cheng and Starks 2002; Downey and Ainsworth-Darnell 2002). For example, using NELS Cheng and Starks (2002) found little difference between black and white students’ perceived level of college aspirations from their peers. More importantly, the effect of peer college aspirations on students’ postsecondary expectations did not differ among black and white students.

Similarly, Ferguson’s (2001b) ethnographic and quantitative study of black and white middle school and high school students in a suburban community in Shaker Heights, Ohio found no significant difference in the academic culture of black and white students. However, Ferguson did find that blacks who enroll in advanced placement courses are accused of “acting white” and that black students “hold back” more in classes by not turning in assignments and participating less in class. They are also more inclined than white students to act “tough” and get into trouble. Ferguson points out that these patterns are best understood by background characteristics than by the “acting white” hypothesis. After controlling for demographic characteristics, black students’ academic interest exceeds those of their white peers.

Taken together, critiques of the “acting white” thesis dispute the existence of a monolithic, oppositional, black peer culture and casts doubt on the notion that a negative peer culture explains racial differences in educational outcomes. Nevertheless, some scholars speculate that school compositional attributes and gender may explain the inconsistent findings on the “acting white” thesis (Downey and Ainsworth-Darnell 2002). Studies have documented that school composition may reduce black students’ chances of forming social ties with black peers with whom students may find common interests and academic support (see Clark 1989). Poor and segregated schools, where students are likely to underperform academically and perceive alienation and poor support from

adults, may facilitate the emergence of an oppositional culture, not necessarily as a rejection of education per se, but as resistance to oppressive conditions of learning (Anyon 1997; Ferguson 2001a; Fine 1991; MacLeod 1987). Under this contextual setting, black students may turn away from academic endeavors and focus instead on non-academic activities to build their self-esteem and gain peer validation (Hare 1985; Washington and Newman 1991). These environmental conditions may have more pronounced effects on black males than black females because teacher expectations and support are often lower for black males (Ferguson 2001a; Noguera 2003b; Roderick 2003). In the absence of strong adult support in school, black males may rely more on their peers to develop a positive self-image (Hare 1985). The over-reliance on peers for self-validation may render black males vulnerable to peers who reject academic effort as important for future success (Washington and Newman 1991). Such peer pressures reduce significantly the chances of black males doing well in school and pursuing their postsecondary education.

Roderick (2003) investigates how contextual setting, race, and gender interact to influence gender differences in the educational trajectories of black students. In a study of black adolescents in Chicago, Roderick found that black males and females with comparable academic achievement through middle school experienced very different trajectories once they entered high school. Although both black males and females had difficulties managing their new academic freedom and preserving through their challenging academic courses, black males did much worse than black females. The difference was in the level of support that they received from their parents and teachers. Consequently, most of the black males joined gangs and engaged in disruptive behaviors which ultimately led to dropping out of high school. The black males who completed high school did so because they had strong family and nonfamilial support, became their own advocates by forming their own network of supportive individuals who could

provide academic assistance. The boys' advocacy knocked down racial stereotypes and forced teachers to see them as individuals. Unfortunately, many of the male high school graduates had academic records that were too poor to qualify for enrollment and persist in a postsecondary educational institution.

The importance of resiliency and a positive peer network is also underscored in the inspiring story of three black male professionals (two of whom are physicians and one who is a dentist) from the disadvantaged, and often dangerous, neighborhoods of Newark, New Jersey (Davis *et al.* 2002). These young men made a commitment in high school to support each other in their pursuit of medical careers. Their narrative makes evident that their close bond helped all three men resist negative peer pressures and navigate through difficult and life-threatening experiences in order to persevere from high school through postsecondary education.

In summary, race and gender may interact to affect gender differences in postsecondary destination in the following way. While both black males and females are negatively affected by poor, hostile, and often segregated schools, black males are most vulnerable to an anti-achievement peer culture because they experience many academic setbacks throughout their schooling and, once in high school, they receive inadequate family and school support to address their academic difficulties. Weak adult support increases black males' exposure to negative peer pressure which, in turn, reduces the odds of black males ever going to college. By contrast, black females seem to be somewhat more advantaged than black males, as there is less evidence of a strong oppositional cultural influencing their behaviors and expectations.

Future Outlook and Plans

In the end, students must possess the educational expectations and plans that

facilitate postsecondary educational attendance. Educational expectations differ from aspirations in that educational aspirations represent the “idealistic orientations” or abstract ideologies of an individual’s hopes and wishes regarding the importance of education (O’Connor 2000). In contrast, expectations are mediated by the realities of students’ encounters that reflect the opportunities and structural constraints that shape students’ outlook on social mobility. Mickelson (1990) refers to this type of educational orientation as “concrete attitudes” because they are based on the material realities (the return of education on social mobility, finances for going to college, academic competency, school disciplinary history, discrimination, opportunities in the labor market, and so on) that influence educational efficacy and postsecondary educational plans.

The evidence shows that expectations, and not aspirations, are more strongly related to students’ educational outcomes (Hanson 1994; Mickelson 1990; O’Connor 2000). Students’ educational expectations are mitigated by their social experiences in and outside the home and school. Black males may have diminished educational expectations as a result of their marginalized experiences at the home and school. Black males are more likely to get in trouble, be suspended, held back, be placed in low-ability classes, and have fewer positive interactions with teachers, other school personnel, and family members (Gordon *et al.* 1994; Noguera 2003b). These experiences may lead young black men to develop a pessimistic outlook towards their educational future which may “exacerbate their oppressive conditions” reducing the likelihood that they will pursue a postsecondary education (O’Connor 2000).

While black females are also exposed to disadvantaged conditions at home and school, they have the unique opportunity, through their daily interactions with their mothers, to witness the realities of being a parent, and in many cases, a single parent managing the on-going responsibilities of a family. This experience may encourage

black girls to pursue an education in order to avoid the trappings of their mothers' circumstances (López 2003). The relationship between college expectations and positive behavior is underscored in Lucker's (1996) comprehensive study of adolescent girls. She found that a positive outlook linking education to social mobility and occupational success discourages adolescent girls from having babies. Similarly, Roderick (2003) found that the black males who graduated from high school and earned decent grades achieved these accomplishments by converting their educational expectations into self-advocacy by seeking out teachers' assistance to nurture student academic progress. Thus, educational expectations is strongly linked to behaviors that can make the difference in persisting through high school and rising the odds of going to college.

In addition to having college expectations, students must also plan to pursue a college education. The rational choice framework on college choice posits that individuals are rational actors and accordingly base their decision to pursue a college education by weighing the relative costs and benefits of going to college (Becker 1975; Hossler *et al.* 1989; Hossler *et al.* 1999; Schultz 1977). This model suggests that stratification in higher education is a product of the choices that individuals make to obtain the maximum benefit that they can receive from their postsecondary destination. The premise is that students have "(near) perfect information" to help them decide whether to attend college and then which college to attend (Hossler *et al.* 1999). The model's emphasizes the value that students assign to each noncollege alternative and, once they have made the decision to attend college, the value students assign to college characteristics (such as proximity of colleges and universities, financial costs, student body, college prestige, and so on) in the process of selecting a college (Hossler *et al.* 1999).

Black males and females are "econometricians" in the sense that they are likely to evaluate their competing options, namely present versus future earnings, in their

determination of whether or not to attend college. The employment realities of black males may weaken the notion that education is a path for occupational mobility. In 2000, black males had the highest unemployment rate when compared to black females, Latinos, and whites: 14%, 10.5%, 10.5%, and 7.6%, respectively (Bureau of Labor Statistics 2000). In past decades, the unemployment rate has been highest among black married men who were the primary breadwinners in their households (Staples 1987). The employment situation is also stark for black youths; their unemployment rates are higher than those of white and Latino youths (Bureau of Labor Statistics 2004; Staples 1987). In terms of employment, black males continue to earn less than their white male counterparts at equal levels of education (Conley 1999; Staples 1987). These economic realities may lead young black men to reason that there are few occupational opportunities available, and those that do exist reward black men's educational credentials at lower rates compared to those of white men. Media portrayal of successful black men as athletes, rappers, comedians, and entertainers may also weaken black males' expectations to pursue a college education (Noguera 2003b; Roach 2001). In addition, black males may also consider the armed forces as another employment option. For many years, the military has been a source for employment and a resource for access to higher education. Although blacks who enlist in the armed forces experience a higher rate of unemployment, even in relation to blacks with no military service, the option to re-enlist (which blacks exercise at a higher rate than other groups) provides yet another opportunity for long-term employment (Staples 1987). Hence, the high unemployment rates and perceived restricted occupational mobility may lead black men to choose not to invest in their educational future and instead find work after high school completion, perhaps in areas that they perceive the most opportunities for advancement: entertainment or the armed forces.

Although black women have the lowest earnings among all full-time workers,

black women enjoy the highest increase in weekly wages for additional years of education. In 1998, a black woman with a high school diploma earned on average \$356 per week, with a bachelor's degree \$605, and with an advanced degree \$788. These premiums represent increases of 70 percent for a bachelor's degree and 121 percent for an advanced degree over earnings with a high school diploma (Bureau of Labor Statistics 1999). These earning differentials on the basis of degree attainment are likely to create a strong incentive for young black women to pursue a postsecondary education. Moreover, the opportunity to earn substantially more may encourage young black women to defer marriage and childbearing for later in their adult lives when they have completed their postsecondary education. In a study of a nationally representative sample of 1980 high school sophomores, Beattie (2002) finds that young women's decision to go to college enrollment is less "instrumental" and motivated by non-economic factors compared to that of men. Regardless of race and ethnicity, women pursue a college education despite evidence that they earn less compared to their male counterparts at equal levels of education. Black males' *habitus* may be more focused on economic opportunities for social mobility, while black females may consider social mobility in tandem with their goals of being mothers and wives (Dumais 2002; Mickelson 2003). In summary, the evidence suggests that the evaluation of whether or not to pursue a college education is shaped by the lived experiences and perceptions of opportunities that each group encounters. Negative outlooks and dispositions can further reduce a student's chance of pursuing higher education.

Summary and Hypotheses

Research on college predisposition indicates that academic preparation has a profound impact on the probability of college enrollment. Black students underperform

in scholastic achievement compared to their white counterparts, and black males are less likely than any other race by gender group to experience academic success (Slater 1994). But because many colleges, such as two-year institutions accept students with weak academic backgrounds, there may be other factors that influence the college enrollment of black students, and black males in particular.

The literature on postsecondary enrollment has identified six factors that affect the college entry of students: (1) student and family background, (2) academic preparation and educational expectations, (3) parental support, (4) extra-familial influences such as peers and teachers, (5) school characteristics, and (6) college policies and activities regarding financial aid and recruitment (Hossler and Gallagher 1989). Five of these factors are at the student level and constitute the predisposition phase, the period during the high school years when students develop the academic background and expectations that prepare and predispose them towards college enrollment. This dissertation investigates how aspects of the predisposition phase channel black males away from a postsecondary education but guide black females towards college entry.

Theories on the educational outcomes of minority student focuses on how parents, schools, and peers as well as student outlooks influence the racial disparity of student academic performance and other school outcomes. In addition, a growing body of literature is focusing on the educational outcomes of black males and the gender disparity within the black student population (Coleman 2001; Gordon *et al.* 1994; Kleinfeld 1998; López 2003; Noguera 2003b; Wimberly 2000). From this body of work, several hypotheses have been put forth to explain the gender disparity in blacks' college enrollment. These include the absence of black male role models in many black families and schools; discrimination against black males in education and in employment⁶; an

⁶The effect of employment discrimination is not investigated in this study because NELS has no data to measure this concept..

anti-achievement ethic that devalues the importance of education for social mobility; and the media's portrayal of black males as athletics, musicians, or entertainers, professions that require little or no formal education⁷ (Fordham and Ogbu 1986; Slater 1994). To date, these hypotheses have not been investigated systemically. Below I discuss how theories of minority achievement affect the college entry of black students through a series of hypotheses.

Academic Preparation

A growing body of research has documented that black adolescent males are less likely to do well in school and go to college compared with their respective female peers (Coleman 2001; Kleinfeld 1998; López 2003; Roach 2001; Slater 1994; Washington and Newman 1991). By the time students graduate high school, those who are not academically prepared have a lower likelihood of enrolling in a postsecondary educational institution.

Hypotheses 1

Controlling for family background, black males are less likely to go to college when they have 1. repeated a grade, 2. poor grades, and 3. low test scores.

Parental Influence

Parental support and encouragement have a positive relationship with students' academic performance and postsecondary destination. Parents are able to pass down their assets in multiple forms through their economic capital (income, education, and occupation prestige), human capital (education), cultural capital (educational expectations, norms, behaviors, and overall disposition associated with high status groups), and social capital (interactions with parents, family members, and other adults

⁷Media portrayal of black males is also not investigated in this study because NELS has no data that measures this phenomenon.

such as teachers). Gender differences in the distribution of parent capital may yield gender differences in college entry.

Hypotheses 2

Controlling for family background, black males are more likely to go to college when their parents 1. have college expectations, 2. discuss academic matters, 3. are involved in schools, and 4. supervise their whereabouts.

School Influence

Black students are more likely to attend racially segregated high schools with high concentration of poverty. Many schools do not offer adequate opportunities for students to obtain a college preparatory curriculum, and equally important, guidance to navigate through the college enrollment process (McDonough 1997). Given the limited resources of the schools and the poor academic preparation of black males, opportunities to form positive relationships with teachers may be limited. Despite these organizational challenges, black males who perceive positive teacher expectations are more likely to go to college (Noguera 2003b)

Hypotheses 3

Controlling for family background, black males are more likely to go to college when they perceive college expectations from their teachers and counselors.

Peer Influence: Academic Disengagement

Peer norms and beliefs become more salient during the high school years. Peer groups who share similar attitudes and behaviors experience similar trajectories. Students who have friends who stay in school and plan to go to college are more likely to proceed in the same direction (Hallinan 1983). Some researchers argue that black students have a negative peer group that devalues the importance of an education and

sanctions fellow students for studying, doing homework, and excelling in school, behaviors that are seen as violations of the peer group culture. In addition to having friends with an anti-achievement ethic, black males may also display academic disengagement through school misbehavior. Thus, black males who misbehave and have friends who are not in school or hold an anti-achievement ethic are less likely to go to college.

Hypotheses 4

Controlling for family background, black males are less likely to go to college when they 1. misbehave in school, 2. have friends with low identification with school norms, and 3. have friends who dropout of school.

Educational Outlook and Disposition

Ultimately, the decision to go to college rests on the student. Students are not passive agents. They internalize and react to the multiple discourses and experiences they share with family members, school personnel, friends, and the outside world-- interactions which in turn may shape educational expectations and plans for the future. Compared to black females, black males may be more sensitive to diminished economic returns of college educated black adults, and therefore may be more likely to pursue endeavors that appear to provide financial security such as the military.

Hypotheses 5

Controlling for family background, the likelihood of college entry is higher for black males with 1. college expectations and 2. no plans to join the armed forces.

The next chapter describes the methods used for analysis. I also provide a detail description of the variables used to evaluate the relative importance of these hypotheses. Those analyses are presented in Chapters 4, 5, and 6.

CHAPTER 3

DATA, MEASUREMENT, AND ANALYTIC STRATEGY

Introduction

In the preceding chapters, I showed that the gender gap in college enrollment has widened over the past two decades, favoring females and altering significantly the gender landscape in American colleges and universities. However, the gender gap is most acute among black students, at a rate of almost two-to-one favoring black women. I also discussed the postsecondary literature and research on black-white and gender differences in school outcomes. A synthesis of both sets of literature identifies academic preparation, parent support, school support, academic disengagement, and future outlooks as key factors that predispose students to pursue a college education. I posit that an exploration of the gender gap in postsecondary enrollment should reveal how the determinants of college predisposition affect the postsecondary enrollment patterns of males and females across racial/ethnic groups.

The dissertation examines the black gender gap in two- and four-year college enrollment. It draws from the National Educational Longitudinal Study of 1988 (NELS), a nationally representative panel study of American students that followed the same students from 1988 when they were eighth graders through 2000, eight years after their scheduled high school graduation.

I use two methods to examine the black and white gender gaps. The first method--multinomial logistic regression--models the postsecondary enrollment patterns of two distinct outcomes within the first two years after high school graduation: enrollment in a two-year college versus never enrolled and enrollment in a four-year college versus never enrolled. Because the outcome variable for the potential “delayed” enrollees is available only as an aggregate measure of both two- and four-year college enrollment, the second method--logistic regression--models only one outcome, enrollment in a postsecondary educational institution versus never enrolled more than two years after high school completion.

The rest of this chapter consists of four sections. The first section, *Dataset*, describes in detail how NELS was designed, how respondents were selected and what components were included in the study. In the second section, *Analytic Samples*, I discuss how and why I constructed the two analytic samples for analysis. The third section, *Measures*, provides a detailed description of the outcome variables and predictors used in the analyses. I also include a discussion of the sample weights used and how I dealt with NELS’ non-random sample design and missing data. The last section, *Analytic Strategy*, describes the data analysis methods and strategy.

Dataset

I investigate possible explanations for the gender gap among blacks and whites using the National Educational Longitudinal Study of 1988 (NELS:88). I exclude Asians and Native Americans from my analysis because neither group has sufficient cases to generate reliable estimates from multivariate analyses. I also exclude Latinos because among this community of young students there is virtually no gender gap (see Figure 1.3). Moreover, Latinos’ postsecondary trajectories are complicated by their overall poor

enrollment rate in undergraduate institutions. Exploring this issue requires separate investigation of Latino students' disproportionate enrollment in two-year institutions of higher education, college persistence, and transfers between institutional types, areas that are beyond the scope of my dissertation's research agenda.

The National Education Longitudinal Study of 1988 (NELS) is administered by the U.S. Department of Education's National Center for Education Statistics (NCES). It is a nationally representative panel study that followed a cohort of eighth graders for twelve years as they moved through high school and into post-secondary education or employment. NELS consists of a base year study and four follow-ups. The base year study utilized a two-stage stratified probability design to select a nationally representative sample of eighth graders attending American public and private schools in 1988. Schools constitute the first-stage in sampling. Students within the sampled schools represent the second stage. A random sample of students in each participating sampled school produced a base year student sample of 24,599 eighth graders who attended 1,052 American public and private middle schools, approximately 23 students per school sampled (Curtin *et al*, 2002). Subsequent follow-ups were conducted during high school and several years after the eighth graders were scheduled to complete high school. The first follow-up was in 1990 when the eighth graders were expected to be in the tenth grade; the second follow-up was in 1992 when the eighth graders were expected to be in the twelfth grade; the third follow-up was conducted in 1994, two years after the 1988 participants were expected to have completed high school; and the fourth follow-up (final wave) was in 2000, eight years after the eighth grade cohort was expected to have completed high school.

In addition to following the *same* 1988 eighth graders throughout the four follow-ups, NCES "freshened" the original sample in 1990 and 1992 by surveying a nationally representative sample of students who were not included in previous waves of the study.

An example of a 1990 “freshened” student is a student who, in 1990, was a tenth grader attending an American high school but was not represented in the 1988 base year survey because he or she was not in the eighth grade or was in the eighth grade but not living in the country in 1988. An example of a 1992 “freshened” student is a student who was neither an eighth grader attending an American middle school in 1988 nor a tenth grader attending an American high school in 1990 but who, in 1992, was a twelfth grader enrolled in an American high school. The refreshing process allows for the 1990 and 1992 follow-ups to be nationally representative samples of American tenth and twelfth graders in their respective years, and thus, provides researchers the opportunity to conduct cross-sectional and longitudinal analyses on the 8th, 10th, or 12th grade cohort. Simply put, the refreshing process yields a representative pool of American middle school and high school students of diverse backgrounds and educational experiences by accounting for the influx of immigrants since 1965, particularly from Latin America and the Caribbean (Haslip-Viera, 1996; Kasinitz 1992; López 2003; Portes 1996) and the reality that many students do not progress in a sequential grade order and therefore may be out of their modal grade (American Association of American Women 1992; Dawson 1998; Hauser 1999).

During the eighth, tenth, and twelfth grades, students completed surveys and curriculum-sensitive cognitive tests. The student surveys provide information on their educational, vocational, and personal development. The surveys ask students about their academic experience, educational aspirations and expectations, future career and educational plans, peer relationships, extracurricular activities, student-teacher interactions, parental support and involvement, family formation, and work experience. The cognitive tests were designed to measure students’ achievement and cognitive growth. NCES also conducted surveys of parents (in the 8th and 12th grade) and obtained high school transcripts in the 12th grade. These additional instruments augment student

responses to provide more accurate data on student demographics and academic performance.

Analytic Samples

The dissertation consists of two analytic samples of “college-eligible” students. I constructed the first analytic sample from the NELS:88 database of respondents who participated in any survey from the base year through the third follow-up (from 1988 through 1994). The sample, hereafter referred to as the 1994 sample, consists of 1990 tenth graders who graduated from high school in 1992 and completed the third follow-up in 1994. I use the 1994 sample to investigate who enrolls “on-time” in a postsecondary educational institution and what effects student background characteristics and family, school, and peer experiences during high school have on whether or not a high school graduate enrolls in a college soon after high school completion.

In Chapter 1, I showed that although the majority of the gender disparity in postsecondary enrollment exists among young men and women there is a substantial gender gap in favor of women among older students. To explore the postsecondary trajectories of these nontraditional students, I constructed a second analytic sample that *excludes* all students who enrolled “on-time” (between 1992 and 1994) in a postsecondary educational institution in order to assess the postsecondary trajectories of students whose *first* postsecondary enrollment occurred three to eight years after high school graduation. This second sample (hereafter referred to as the 2000 sample) was constructed from the NELS:88 database of respondents who participated in surveys from 1988 (the base year) through the final follow-up in 2000. The 2000 sample consists of 1990 tenth graders, who graduated in 1992 and completed the third and fourth follow-ups. It is important to note that the 1994 and 2000 samples are not mutually exclusive.

The 1994 sample consists of 10th graders who graduated from high school in 1992. In contrast, the 2000 sample is a sub-sample of the 1994 pool of graduates. Both the 1994 and 2000 samples help address the following research questions: What effects do predisposition factors have on the “on-time” enrollment of black and white students of both gender groups? Which predisposition factors and what experiences after high school influence the delayed enrollment of black students? Do black males catch-up with their female counterparts in postsecondary enrollment several years after high school completion? Are these patterns similar to those of white males and females?

As I mentioned, both analytic samples consist of students who were 10th graders in 1990 and received either a high school diploma or high school equivalency certificate⁸ by 1992, their senior year in high school. I restricted the analytic samples to 10th graders because the 8th grade student questionnaire cohort lacks key questions about students’ postsecondary plans as well as peer and school experiences that are relevant to the study of postsecondary trajectories. Further, a sample that consists of eighth graders who completed all subsequent follow-ups reduces the number of cases by over 10 percent⁹, affecting more severely the black student sample, which generally represents only about 11 percent of the total number of respondents surveyed. It is preferable to maintain as many students as possible because a reduction in the number of black respondents can bias the black sample by limiting the participation of key segments (such as immigrants)

⁸ A high school equivalency certificate is also known as a GED (General Educational Development) Diploma.

⁹ The average response rate across the base year and all the follow-ups exceeds 90 percent. Despite the high response rate, the sample size of respondents who completed all waves is smaller than any single follow-up because not every student completed every follow-up. In addition, the sample size for the 1994 and 2000 waves consists of a representative subsample of students who participated in the 1992 wave (Curtin *et al* 2002). Consequently, a sample of respondents from base year through the third follow-up is much smaller than a sample of respondents selected from the first- through the third follow-ups.

of the black population. Also, selecting 10th graders brings in the “freshened” 1990 tenth graders and thus increases the pool of students who may be out of their modal grade, and who may have consequently experienced academic and social difficulties later in high school.

Because my focus is in understanding the trajectories of black and white students who are most likely to go to college (i.e., high school graduates), I excluded high school dropouts from both samples. This exclusion does not bias my results because as Table 3.1 shows, the gender differences among black and white high school dropouts are not statistically significant. I tested for statistical significance by conducting t-tests and logistic regressions separately for blacks and whites in each sample. The dependent variable was whether a student was selected (i.e., a high school graduate) into or excluded (i.e., a dropout) from a sample. The independent variable was whether a student is a male or female. I conducted the logistic regression using STATA, a statistical program that adjusts standard errors to account for the two-stage, nonrandom sampling design of NELS:88. In STATA, I used the logistic regression command with the weight and robust options¹⁰ to adjust for probability of selection and non-random sampling design. Each analysis confirmed that in both the 1994 and 2000 samples, contrary to popular perception, there were no significant gender difference among black high school dropouts or black high school graduates. Such differences emerge only in relation to college attendance. This finding is also true for white students.

¹⁰ STATA command: `logit dependent variable independent variable(s) [pweight=sample weight], robust cluster(school identification variable).`

Table 3.1. High School Status by Race and Gender for the 1994 Sample

| Student status | Black males | Black females | White males | White females |
|----------------------|-------------|---------------|-------------|---------------|
| High school graduate | 84% | 90% | 95% | 94% |
| High school dropout | 16 | 10 | 5 | 6 |
| Unweighted N | 596 | 675 | 4,065 | 4,263 |

Note: Descriptive statistics are weighted and adjusted for two-stage sampling design using the statistical program STATA. Unweighted sample size is reported. Missing values are excluded from calculation of means.

Sample Weights and Design Effects

NCES created sample weights to account for students' unequal probability of selection in all the stages of the sampling process; this includes the oversampling of certain groups, such as blacks, Latinos, and Asians, to ensure their national representativeness in the study. NCES weights also adjust for nonresponse, that is, students' lack of participation despite being selected for the study (Curtin *et al* 2002).

I applied two different sample weights to correspond with my two analytic samples. I used sample weight F3F1PNWT for the 1994 student sample. This weight is appropriate for a sample of tenth graders who completed the second and third follow-ups. The second sample weight is F4F1PNWT is designed for 10th graders who completed the second, third, and fourth follow-ups.

I conducted descriptive and multivariate analyses using STATA. Specifically, I employed STATA's estimation command for complex survey data to perform multinomial logistic (MNL) regressions. The procedure, *svyset*, allows researchers to specify the primary sampling unit in which the cases are nested and the strata (U.S. geographical regions) in which the primary sampling units (PSU) are located¹¹. But

¹¹ STATA command: first one must set the strata and primary sampling unit (psu) and then run the multinomial logistic regression command. The command to set the strata and psu are: `svyset psu variable name; svyset strata variable name`. The command for

because the *svyset* command does not offer the option to generate standardized regression estimates or a Pseudo R^2 for multinomial logistic (MNL) regressions, I also employed the MNL procedure with its robust option¹² to obtain this information. I conducted all multivariate analyses using both procedures, and both yielded identical unstandardized MNL regression estimates and odds ratios.

Measures

This section discusses the outcome variables and predictors considered in the analysis of students' postsecondary trajectories. Descriptive statistics for the 1994 sample are shown in Table 3.2. Table 3.3 displays the descriptive statistics for the 2000 sample. In addition to all the predictors in Table 3.2, Table 3.3 provides descriptive statistics for four variables drawn solely from the fourth follow-up.

Outcome Variables

Table 3.2 describes the first outcome variable, 1994 postsecondary enrollment. NELS provides detailed information (type of institution as well as the month and year of enrollment) on whether or not a student's *first* postsecondary enrollment occurred within the first two years (between 1992 and 1994) after high school. Using this information, I constructed a trichotomous variable that assigns a value of one to students who attended a two-year postsecondary educational institution and a value of two to students enrolled at a four-year college. The reference category has a value of zero and is designated for all non-college enrollees. Two-year PEIs include public and private degree-granting

conducting MNL regression for complex survey data is: **svymlog** dependent variable independent variables [**pweight**=sample weight], **basecategory**(0).

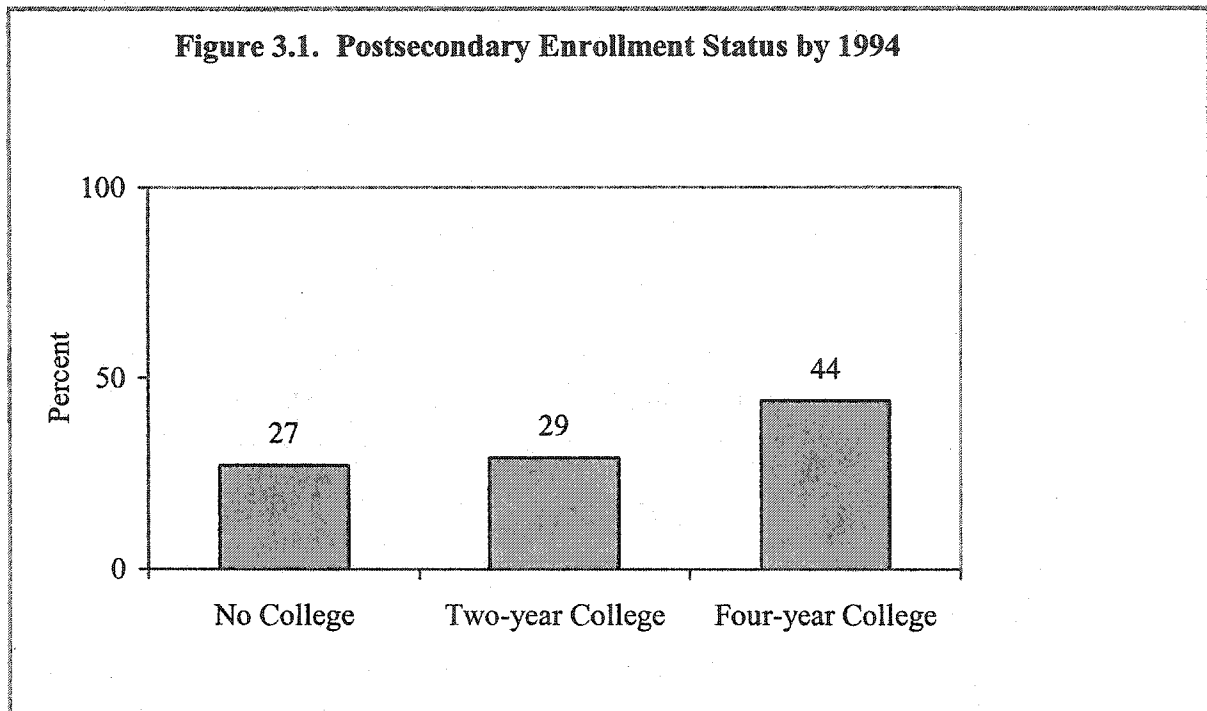
¹² STATA command: **mlogit** dependent variable independent variable(s) [**pweight**=sample weight], **robust cluster**(PSU) **basecategory**(0).

institutions that require two years or less to earn an associate degree, often called community colleges or junior colleges. Four-year colleges include public and private institutions that grant bachelor's degrees. Table 3.2 shows that 1994 postsecondary enrollment status has a mean of 1.26 and a standard deviation of .80. Figure 3.1 provides the percent distribution, a more meaningful descriptive statistic of the 1994 postsecondary enrollment status. Among the 1992 high school graduates, less than half enrolled at a four-year postsecondary educational institution (44%). Twenty-nine percent of the sample enrolled at a two-year PEI, and twenty-seven percent did not enroll in any postsecondary educational institution. In this sample, students who enrolled in a community or four-year college are referred to as "on-time" enrollees because their enrollment occurred within the first two years of high school completion.

The second outcome, postsecondary enrollment between 1995 and 2000, is reported in Table 3.3 and is derived from the 2000 sample. Because NELS does not disaggregate enrollment status by type of institution in the fourth follow-up, the 2000 outcome was coded as a dichotomous variable. This outcome variable assigns a value of one to students who enrolled at either a two- or four- year college and a value of zero to students who reported no postsecondary enrollment during this period. Postsecondary enrollment by 2000 has a mean of .43. This means that 43% of students who did not enroll in a postsecondary educational institution immediately after high school did so within three to eight years after high school graduation.

It is important to note that both dependent variables only measures first time enrollment. Issues concerning duration of enrollment, persistence, and attrition are not considered in this study.

Predictors

Figure 3.1. Postsecondary Enrollment Status by 1994

Background Characteristics. Eight sets of variables measure student background, family, and school characteristics. *Non-Hispanic black* (hereafter referred to as black) is a dichotomous variable coded one for black and zero for Non-Hispanic white (hereafter referred to as white). In the 1994 sample, blacks constitute 10 percent of the respondents. Blacks are represented at a slightly higher rate in the 2000 sample (13%). *Male* is also a dichotomous variable coded one for male and zero for female.

Family characteristics: Family characteristics are measured by whether or not a student lives with both biological parents, number of siblings, and parent socioeconomic status. *Two-parent household* is a dichotomous variable that assigns a value of one to students who live with both parents and a zero to students living under other family arrangements. *Number of siblings* ranges from zero (no siblings) to 6 (six or more siblings). *Socioeconomic status* is a composite of parents' education, occupational prestige, income, and a selection of family possessions constructed by NCES (Curtin *et al* 2002).

School characteristics are measured by the type of school, location of school district, percent of minority students, and percent of students on free lunch (a proxy for school poverty). Type of school and school district are dichotomous variables. Type of school is coded as one for public schools and zero for private institutions. School district was coded into two dummy variables, urban and suburban, with rural as the reference category. Percent of minority students and percent of students on free-lunch are ordinal-level variables with values that range from 1 through 7, where one indicates no minority students and 7 indicates a highly racially segregated minority high school. Similarly, a value of one on percent free lunch indicates low school poverty while a value of 7 indicates over 76% school poverty.

Academic preparation: To examine students' academic progress from middle school through high school, three academic measures are considered: held back a grade before the tenth grade (grade retention), academic achievement test scores, and high school grades. Held back a grade is a dichotomous variable that measures whether or not a student ever repeated a grade prior to entering the tenth grade. This indicator is derived from teens' academic history, provided by both parents and students. In the 1994 sample (see Table 3.2), 10 percent of all students had been held back a grade. The 2000 sample of students (see Table 3.3) who entered college after a delay, shows that a higher percentage of students (21%) had repeated a grade some time between kindergarten and the tenth grade.

Academic achievement is a standardized composite of students' reading and mathematics test scores, constructed by NCES. NCES administered curriculum-sensitive, aptitude tests in the 10th and 12th grades. They are standardized with a mean of 50 and a standard deviation of 10. I use the tenth grade test scores instead of the 12th grade test scores because the 12th grade test scores have over 20 percent of missing cases. NCES speculates that since the 12th grade achievement tests were administered in the spring of 1992, the last semester of students' senior year of high school, many students opted not to take the test, perhaps reasoning that the achievement tests would have minimum impact on their last semester of high school (NCES 2000). For the few students for whom there was no 10th grade reading and mathematics composite test score, I used their 12th grade test scores when available¹³. The average composite test score for the 1994 sample is 53.59, and the average test scores for the 2000 sample is 47.59.

High school grades measure the average cumulative grade students received in English, mathematics, social studies, and science while in high school. The grades were

¹³ The Pearson's correlation coefficient between the 10th grade and 12th grade reading and mathematics composite measure is .90 (see Appendix A).

obtained from the school transcript file. The index for high school grades was constructed by taking the mean across subjects of the average grade students received in each subject. The Cronbach's alpha reliability statistic for is .92. The lowest score a student can receive is one indicating that a student failed all four subject areas. The highest grade score is 12.72 which indicates that a student received an A average across all four subjects. In the 1994 sample, students' average score was a 7.43, compared to 5.75 in the 2000 delayed-college sample.

Taken together, the three academic measures show that the students in the 1994 sample, which includes potential "on-time" enrollees, have stronger academic preparation than students in the 2000 delayed-college sample who did enroll in a college within the first two years after high school completion.

Parent and school influences

All measures of parent and school influences are based on student perception of the level of support or resources they receive from their parents and key school personnel during their first term of the 10th grade. Several measures of parental support are considered. They include parent educational expectations, parent academic discussions, parent academic supervision, parent school involvement, parent social supervision, and parent household rules.

Parent educational expectations are measured by taking the highest level of a mother's or father's educational expectations for her/his teen. The values assigned to each level of educational expectations are specified in parentheses below. Parents may expect their teens to achieve (1) less than a high school diploma, (2) a high school diploma, (3) a vocational educational after high school, (4) attendance at a two-year college, (5) attendance at a four-year college, (6) a baccalaureate degree, (7) or post-

graduate education. In the 1994 sample, parent educational expectations have a mean of 5.53, suggesting that on average students feel that their parents expect attendance at a four-year college. In contrast, students in the 2000 sample report lower parent educational expectations (mean of 4.53). *Parent academic discussions* is an index that measures how often parents have discussions with their teens about school work, grades, school activities, college preparation, and going to college. Students report if their parents discuss these issues never, sometimes, or often. To construct an index of parent academic discussions, I took the average of students' responses across these five areas (variables)¹⁴. The index has a scale from one to three, where one indicates no discussions across all five areas and three indicates that on average parents discuss these issues frequently. Students in the 1994 sample report slightly more academic discussions with their parents (mean of 2.10) than their counterparts in the 2000 sample (mean of 1.93).

Parent academic supervision is an index that measures the average frequency of parents' activities to maintain their teens in good academic standing. Parent academic supervision takes the average response across two variables. Students specify if they never, rarely, sometimes, or often receive assistance with homework or have their parents review the teens' homework. One is the lowest score a student can receive to indicate that he or she never receives academic supervision. A value of four indicates that on a regular basis parents check or help with their teens' homework.

Parent school involvement measures how often parents participated in their teens' high school activities. Students report if their parents (0) never, (1) once or twice, or (2) more than twice participated in school events and activities or volunteered in school. Parental school involvement was created by taking the average student response across these three areas. A value of zero indicates that a student's parent did not participate in

¹⁴ The Cronbach's alpha reliability statistic for the five variables is .80; a value of .70 or better generally suggests that the items in a scale are internally consistent, and therefore, go well together to measure an overall construct (Newton and Rudestam 1999).

any school activity. Students whose parents participated several times in every activity received a value of two. The Cronbach's alpha reliability statistic for this index is .68. The 1994 respondents report higher parental school involvement (mean .74) than their 2000 counterparts (mean of .52).

Parent social supervision. Students report how often their parents try to find out who are the teens' friends, teens' whereabouts after school and at night, how teens spent their money, and what teens do with their free time. Students respond whether they (1) are unaware of their parents' level of supervision, (2) know that their parents supervise, (3) know that their parents supervise just a little, (4) indicate that their parents supervise some of the times, or (5) report that their parents supervise all of the time. I created an index for parent social supervision by taking the average value of students' responses in the areas discussed. The Cronbach's alpha for this measure is .84. In contrast to the other parent support indices previously discussed, students who are more likely to enroll "on-time" in college do not report they have higher parental supervision (Table 3.2, mean 3.91) than those who did not enroll in any postsecondary educational institution between 1992 and 1994 (Table 3.3, mean of 3.74).

Parent household rules. Students indicate how often their parents have rules about doing household chores, watching television or playing video games, or limiting time with friends. Students' responses range from never, rarely, sometimes, and often. The index was created by averaging students' responses across the three areas. The Cronbach's alpha reliability statistic for this index is .54. A value of one indicates that students do not have household rules, and a value of four indicates that on average parents have frequent household rules in all three areas. The 1994 and 2000 samples share similar scores. The 1994 sample has an average score of 2.72, and the 2000 sample average score is 2.63.

School educational expectations are measured by taking the highest expectations for that student's favorite teacher or counselor. The expectations include college attendance, full time employment, joining the military, entering a trade school, getting married, doing what the teens want, or the teacher or counselor does not care. Most students report that their teacher and counselor have college expectations. Very few students (2% or less) report expectations in the other categories. The teacher and counselor variables were converted into dichotomous variables that assign a value of one to college expectations and a zero to other types of expectations. The highest expectation between the two dummy variables was taken to measure a school's future expectations. The average score for the 1994 sample is .70; this is .17 points higher than the 2000 sample (mean=.53).

Academic disengagement

Academic disengagement is measured by peer influence and school misbehavior, school transfers, and getting arrested. *Peer academic perception*. Students report the importance that their peers place on going to class regularly, studying, getting good grades, finishing school, and continuing education after high school. The level of importance ranges from (1) not very important, (2) somewhat important, and (3) very important. An index of peer academic influence was created by taking the average response across these five variables. The Cronbach's alpha reliability statistic is .84. A score of one indicates that peers place no importance on all the five areas. A value of three, the highest score a student can be assigned, indicates that peers think that education is very important. The mean statistics for students in the 1994 and 2000 samples suggest that peers have similar academic perceptions (2.52 and 2.39,

respectively), regardless of when students enrolled at a postsecondary educational institution.

Two additional measures of peer influence include the number of peers and siblings who dropped out of high school. Both variables are coded into dichotomous variables. A value of one indicates one or more peers or siblings dropped out of school, and a value of zero suggests that no friend or sibling dropped out of school. Fewer students in the 1994 report they have friends (18%) and siblings (11%) who dropped out of school compared to students in the 2000 sample who report that 31% of their friends and 15% of their siblings did not complete school.

School misbehavior is an index that measures student report on how frequently they are late to class, skip or cut classes, get in trouble, and are suspended from school. Student responses range from zero, never experiencing any of these problems to four, experiencing these incidents 10 or more times. The index was created by taking the average response across all behavioral problems. The Cronbach's alpha for this index is .67. In general, both the students in the 1994 and 2000 samples report low scores of misbehavior problems, although the 2000 mean score (.60) is higher than the 1994 sample (.47).

School transfer is a dichotomous variable that measures whether or not a student was transferred from school for disciplinary reasons. A value of one indicates a student was transferred one or more times; a value of zero indicates no disciplinary transfer. On average, virtually no student in both the 1994 and 2000 samples (mean=0) experienced a disciplinary transfer.

Student arrest is also a dummy variable that assigns a value of one to students who have been arrested one or more times and a zero to those who have never been

arrested. The rate of arrest is similar for both the 1994 (mean=2%) and 2000 (mean=3%) samples.

Future outlooks

Two variables measure a student's future outlooks. They are student college expectations and plans to join the armed forces.

Student educational expectations measure the level of education students expect to achieve in the future. The range of educational expectations consists of nine values; they include (1) less than high school, (2) high school diploma, (3) less than two years of trade school, (4) more than two years of trade school, (5) less than two years of college, (6) two or more years of college, (7) a baccalaureate degree, (8) a master's degree, or (9) an advanced degree such as a Ph.D. or M.D.. The 1994 sample has an average educational expectations score of 6.64 which corresponds to two or more year of college, more than what students in 2000 sample expect (5.12).

Plans to join the armed forces measure whether or not a student planned to take the Armed Services Vocational Aptitude Battery exam. Students who reported such plans received a value of one; those with no such plans received a value of zero. Fourteen percent of the 1994 sample indicates plans to join the armed forces. Instead of plans to join the armed forces between 1995 and 2000, the 2000 sample measures whether or not students enlisted in the armed forces. Among the 2000 sample, few students (6%) report being enlisted in the armed forces.

Student status between 1992 and 1994

Four indicators were selected to measure students' experiences two years after high school. The indicators include employed, joined the armed forces, never married, and number of dependent children. Using indicators for postsecondary enrollment status, employment, and participation in the armed forces, I created two dummy variables to distinguish between students who were *employed* or *joined the armed forces* between 1992 and 1994. I designated "doing nothing" as the reference category. Ninety-one percent of the students in the 2000 sample report being employed between 1992 and 1994. Only 6% of students report they enlisted in the armed forces during the same time period.

Never married is a dichotomous variable that assigns a value of one to single students. The reference category applies to students who are married, living in a married like relationship, or divorced. The divorced category was included in the reference group because less than one percent of students fall in this category. An overwhelming majority (75%) of the 2000 sample reports being single.

The final indicator in the 2000 sample is the *number of dependent children*. This variable was coded into a dummy variable that assigns a value of one to one or more dependent children. The reference category is zero for respondents with no dependent children. Eighteen percent of the 2000 sample has at least one dependent child.

Missing Data

An important analytical challenge that every social scientist faces is how to resolve the problem of missing data. Missing data can create a serious threat to the representativeness of a sample because excluding cases with missing values could result in a sample that is significantly different from the population from which it was drawn. But even if the sample remains unbiased after deleting respondents with missing data, the

reduction in sample size may threaten the power of the relevant statistical test used to detect if an effect truly exists. In my dissertation analysis this would mean that an insufficient number of respondents can threaten our statistical confidence that a black or white gender gap or any other effect truly exists.

Social scientists have several options for resolving the missing data problem. Three of the most common and easy to use techniques include listwise deletion, mean substitution, and regression-based imputation. Listwise deletion consists of deleting all cases that have at least one missing value in any of the variables considered. As mentioned above, this approach can bias the sample and reduce the power of statistical tests. Mean substitution is a simple process in which the mean of the observed values in a variable is assigned to every respondent with a missing value in that variable. The weakness in this approach is that it artificially reduces the variability among respondents and weakens the relationship with other variables because no other information about the respondent is considered for filling-in the missing value (Wayman 2003). For example, under mean substitution, respondents for whom NCES could not obtain their school transcript would be assigned the same grade regardless of their background or other available information that may be highly associated with grades. Regression-based imputation is an improvement from listwise deletion and mean substitution. Using regression analysis, this method considers all the information available, for example, a respondent's race, gender, income, and test scores, to predict a value for the occasional variable with missing data. The limitation with this approach is that it reduces variability by generating only one estimate to represent the plausible value of the missing data.

To treat the missing data in my samples, I used multiple imputation, a technique that, without altering non-missing data, predicts the missing values of a variable by using the observed values of the other variables in the sample while adjusting for variability (the error) that exists in estimating missing data (Wayman, 2003). This process is

performed by a complex algorithm that produces several datasets; each data file is generated by a different version of what the model should be for predicting the missing values. Across all the imputed datasets, the observed values remain the same but the missing values are imputed with different predicted values that represent plausible estimates of how the missing data might appear in the population (Wayman 2003).

In both of my dissertation samples, there are only a few variables with over 10% of missing cases. In the 1994 sample, high school grades has the highest percent of missing cases (12%). In the 2000 sample, number of dependent children (18%), parental school involvement (15%), and teacher expectations (15%) are missing the most data. Despite few variables with high rates of missing values, excluding all cases with at least one missing value would reduce the 1994 and 2000 samples by over 40%. Too many cases would be lost to guarantee high statistical power for multivariate analysis.

To perform multiple imputation, I used AMELIA, a multiple imputation software program (King *et al.* 2001) to generate five data sets or five different estimates for each case with missing data. I then merged all five datasets into one data file; the merged dataset contains five rows of data for each student. Variables with no missing data have the same observed value in each row. Rows differ only by the imputed predicted values for missing data. To avoid over-representing each student by five times the rate that he or she is represented in the 1994 and 2000 samples, I adjusted the panel weights by multiplying each weight by one fifth. In this way, the degrees of freedom used to determine statistical significance are adjusted to reflect the actual sample size used in the multivariate analyses.

Analytic Strategy

The central focus of my dissertation is to analyze the gender gap among black students by investigating how predisposition factors shape the educational trajectories of young men and women. This process entails conducting separate analyses by race and gender.

The data analyses and results are presented in three chapters. Chapter 4 examines the gender gap among “on-time” enrollees across racial groups, and Chapter 5 completes the analysis of “on-time” enrollees by assessing whether the gender differences observed are a result of a differential effect of being a male or female.

In Chapters 4 and 5, I conduct descriptive analyses that chart the postsecondary trajectories of black and white high school graduates and explore the gender disparity in postsecondary enrollment. I then conduct multivariate analyses in the form of multinomial logistic regression models. The multinomial logistic (MNL) regression models allow for an examination of a nominal dependent variable that is polytomous (has more than two values) and can be regressed on nominal or continuous predictors (Agresti 1990; Plank and Jordan, 2001). MNL regression is a method of estimating the probability of an outcome while controlling for nominal and continuous predictors. I use MNL to examine the odds of entering a four-year or two-year college versus not enrolling in any college by 1994. The odds are represented by the following formulas:

$$\text{Four-year college odds} = a + b_1(x_1) + b_2(x_2) + \dots b_j(x_j).$$

$$\text{Two-year college odds} = a + b_1(x_1) + b_2(x_2) + \dots b_j(x_j).$$

$$\text{No postsecondary enrollment} = a + b_1(x_1) + b_2(x_2) + \dots b_j(x_j).$$

where:

a= intercept

$b_1 \dots b_j$ =slopes for predictors

$x_1 \dots x_j$ = predictors.

MNL regression is an appropriate statistical technique because, as I show in Chapter 4, the magnitude of the gender gap among different groups differs by type of postsecondary educational institution. Other options such as ordered logistic regression assume that the gender gap is uniform across outcomes and does not allow for modeling gender differences in postsecondary status. Binary logistic regression would also be inappropriate, because it collapses effects of enrolling in a two-year college into the effects of attending a four-year institutions despite the fact that, for example, admissions requirements are quite different at both types of institutions and thus making it unlikely that effects of predisposition factors are uniform across both types of postsecondary educational institutions.

In Chapter 4, the MNL regression models are conducted separately for blacks and whites to assess the relative importance of the predictors on the gender gap. Chapter 5 MNL regression models are conducted for black males, black females, white males, and white females to determine if the observed effects are consistent across gender groups and to test whether there is an interaction effect between being a male or female and a given predisposition factor. The separate models by racial groups reveal which predisposition factors explains the gender gap in postsecondary enrollment. The separate models by race and gender demonstrate how predisposition factors differentially affect the enrollment patterns of males and females across racial groups.

Finally, Chapter 6 investigates the postsecondary trajectory of high school graduates who did not enroll in a college within the first two years after high school completion. This chapter replicates the modeling strategy of Chapters 4 and 5. I conduct binary logistic regression and examine the gender gap among delayed enrollees. I use logistic regression to examine the odds of entering any postsecondary educational

institution versus not enrolling in any college by 2000. The odds are represented by the following formulas:

$$\ln(P / 1 - P) = b_0 + b_1(x_1) + b_2(x_2) + \dots + b_j(x_j), \text{ where}$$

P = probability or odds of enrolling to college

$1 - P$ = odds of not enrolling to any college, and

b_0 = intercept

$b_1 \dots b_j$ = slopes of predictors

$x_1 \dots x_j$ = predictors.

Table 3.2. Variable Description of the 1994 Sample

| Variable | Description | N | Metric | Mean | SD=Standard Deviation |
|--|---|-------|---|------|-----------------------|
| <i><u>Outcome</u></i> | | | | | |
| Postsecondary enrollment | Postsecondary enrollment status, never enrolled is the reference category,(PSEFIRTY) | 9,044 | 0=never enrolled, 1=enrolled at a two-year PEI, 2=enrolled at a four-year PEI | 1.26 | .80 |
| <i><u>Background Characteristics</u></i> | | | | | |
| White | Student is white, used as the reference category. (F3RACE) | 9,044 | 0=non-Hispanic black, 1=non-Hispanic white | .90 | .34 |
| Black | Student is black. (F3RACE) | 9,044 | 0=non-Hispanic white, 1=non-Hispanic black | .10 | .34 |
| Male | Student is male; female is used as the reference category. (F3SEX) | 9,044 | 0=female, 1=male | .48 | .50 |
| Immigrant | Student was born outside of the United States. U.S. born is the reference category. (BYP17) | 8,204 | 0=U.S. born, 1=Born outside the U.S. | .01 | .12 |
| Two-parent household | Student lives with both mother and father. (F2F1FCMP, F2FCOMP) | 8,320 | 0=other family arrangement, 1=two-parent household | .67 | .48 |
| Number of siblings | Number of sibling student has. (BYP3A, F2P102) | 8,829 | 0=no sibling; 6=six siblings or more | 2.10 | 1.5 |
| Family socioeconomic status | Standardized composite of father's and mother's education level, occupation, income, and household possession. (F2SES1) | 9,044 | -2.89=lowest score; 2.54=highest score | .14 | .74 |

Table 3.2 (continued)

| Variable | Description | N | Metric | Mean | SD |
|--|---|-------|--|-------|------|
| Public high school | Student attends a public high school. (1=private high school including religious schools). (G10CTRL1) | 8,962 | 1=public high school; 0=private high school | .90 | .30 |
| School percent of minority student | Percent of minority student in school. (G8MINOR) | 8,562 | 0=none; 7=91-100% | 2.20 | 1.9 |
| School percent of students on free lunch | Percent of students on free lunch school. (G8LUNCH) | 8,564 | 0=none; 7=76-100% | 2.87 | 1.9 |
| Urban school | Student attends an urban high school. (G10URBAN). | 8,951 | 0=suburban and rural; 1=urban | .21 | .43 |
| Suburb school | Student attends an suburban high school. (G10URBAN). | 8,951 | 0=urban and rural; 1=suburban | .43 | .49 |
| Rural school | Student attends an rural high school. (G10URBAN). | 8,951 | 0=urban and suburban; 1=rural | .36 | .47 |
| <i>Academic preparation</i> | | | | | |
| Held back a grade | Student repeated a grade between kindergarten and the 8 th grade. (BYP44, FIN22) | 8,852 | 0=was not held back; 1=repeated a grade | .10 | .35 |
| Average high school grades | Average high school grades taken from student transcript in English, mathematics, science, and social studies. (F2RHENG2, F2RHMAG2, F2RHSIG2, F2RHSOG2) | 7,984 | 1=F; 13=A | 7.43 | 2.32 |
| Standardized reading and mathematics test scores | NCES constructed composite variable of student standardized reading and mathematics test scores. (F12XCOMP, F22XCOMP) | 8,886 | 27.86=lowest score; 71.82=highest score | 53.59 | 9.25 |

Table 3.2 (continued)

| Variable | Description | N | Metric | Mean | SD |
|----------------------------------|--|-------|---|------|------|
| <i>Parent and school support</i> | | | | | |
| Parent college expectations | Highest parent (mother's or father's) educational expectation. (F1S48A, F1S48B) | 8,828 | 1.00=less than high school; 7=Ph.D., M.D. | 5.53 | 1.57 |
| Parent academic discussions | Parent academic discussions about school work, grades, activities, college preparation, and going to college. (F1S105A, F1S105B, F1S105C, F1S105D, F1S105F, F1S105G) | 8,383 | 1=never; 3=often in all areas | 2.10 | .43 |
| Parent academic supervision | Parent checks or helps with homework. (F1S100A, F1S100B) | 8,519 | 1=never; 4=often | 2.53 | 1.56 |
| Parent school involvement | Parent participates in school events and activities and volunteers. (F1S106A, F1S106C, F1S106D) | 8,242 | 0=never; 2=participates in all activities | .74 | .60 |
| Parent social supervision | Parent tries to find out who are teen 's friends and teen's whereabouts and money spending habits. (F1S102A thru F1S102E) | 8,492 | 1=do not know; 5= a lot | 3.91 | .81 |
| Parent household rules | Parent rules on watching television, household chores, and time with friends. (F1S1002 thru F1S100G) | 8,498 | 1=never; 4=often for in all areas | 2.72 | .68 |
| Teacher expectations | Teacher or counselor college expectations. (F1S47E, F1S47F) | 8,387 | 0=less than college; 1=college completion | .70 | .46 |

Table 3.2 (continued)

| Variable | Description | N | Metric | Mean | SD |
|--|--|-------|---|------|------|
| <i><u>Academic disengagement</u></i> | | | | | |
| Peer academic perception | Peer perception on the importance of attending classes, going to school, getting good grades, finishing H.S., and continuing education after high school. (F1S70A, F1S70B, F1S70D, F1S70F, F1S70I) | 8,700 | 1=all items are not important; 3=all items are very important | 2.52 | .44 |
| Number of friends who dropped out of high school | Number of friends who dropped out of high school. (F1S69) | 8,718 | 0=no friends; 1=one of more friends | .18 | .39 |
| Number of siblings who dropped out of school | Number of siblings who dropped out of school. (F1S94) | 8,321 | 0=none; 1=one or more | .11 | .31 |
| School misbehavior | Misbehavior includes skipping, cutting, and arriving late to classes; getting in trouble; and school suspension. (F1S10A, F1S10B, F1S10C, F1S10D, F1S10E). | 9,015 | 0=did not misbehave; 1=misbehaved more than 10 times in all areas | .47 | .48 |
| School transfer | School transfer for disciplinary reasons (F1S10F) | 9,006 | 0=never; 1=one or more | .00 | .05 |
| Arrested | Student arrested. (F1S10G) | 9,006 | 0=never; 1=one or more | .02 | .14 |
| <i><u>Future outlooks</u></i> | | | | | |
| Student college expectations | How far in school a student thinks he/she will go. (F1S49) | 8,955 | 0=less than high school; 9=Ph.D., M.D. | 6.64 | 1.85 |
| Plans to joined armed forces | Plans to take the armed forces examination (F1S50E) | 8,536 | 0=no; 1=yes | .14 | .34 |

Note: Descriptive statistics are weighted and adjusted for two-stage sampling design using the statistical program STATA. Unweighted sample size is reported. An Asterisk (*) denotes, means, not percentages as in the rest of the table. Missing values are excluded from calculation of means.

Table 3.3. Variable Description of the 2000 Sample

| Variable | N | Metric | Mean | Standard Deviation |
|---|-------|---|------|--------------------|
| <i><u>Outcome</u></i> | | | | |
| Postsecondary enrollment (PSEFIRTY, F4NINST) | 2,124 | 0=never enrolled, 1=enrolled at a two- or four-year PEI | .43 | .50 |
| <i><u>Background Characteristics</u></i> | | | | |
| White, used as the reference category. (F4RACE) | 2,124 | 0=non-Hispanic black; 1=non-Hispanic white | .87 | .34 |
| Black, (F4RACE) | 2,124 | 0=non-Hispanic white; 1=non-Hispanic black | .13 | .34 |
| Male (F4SEX) | 2,124 | 0=female; 1=male | .52 | .50 |
| Immigrant | 1,881 | 0=U.S. born; 1=born outside the U.S. | .01 | .10 |
| Two-parent household | 1,949 | 0=other family arrangement; 1=two-parent household | .57 | .48 |
| Number of siblings | 2,056 | 0=no sibling; 6=six siblings or more | 2.42 | 1.5 |
| Family socioeconomic status | 2,102 | -2.24=lowest score; 1.72=highest score | -.32 | .63 |
| Public high school | 2,072 | 0=private high school; 1=public high school | .97 | .18 |
| School percent of minority student | 1,967 | 0=none; 7=91-100% | 2.23 | 1.9 |
| School percent of students on free lunch | 1,963 | 0=none; 7=76-100% | 3.37 | 1.9 |
| Urban school | 2,078 | 0=suburban and rural; 1=urban | .15 | .43 |
| Suburb school | 2,078 | 0=urban and rural; 1=suburban | .39 | .49 |
| Rural school | 2,078 | 0=urban and suburban; 1=rural | .46 | .47 |
| <i><u>Academic preparation</u></i> | | | | |
| Held back a grade | 2,070 | 0=was not held back; 1=repeated a grade | .21 | .40 |
| Average high school grades | 1,972 | 1=F; 13=A | 5.75 | 1.25 |

| | | | | |
|--|-------|---|-------|------|
| Standardized reading and mathematics test scores | 1,856 | 31.69=lowest score; 70.30=highest score | 47.59 | 8.45 |
| <i><u>Parent and school support</u></i> | | | | |
| Parent college expectation | 1,972 | 1.00=less than high school; 7=Ph.D., M.D. | 4.53 | 1.03 |
| Parent academic discussions | 1,856 | 1=never; 3=often in all areas | 1.93 | .42 |
| Parent academic supervision | 1,885 | 1=never; 4=often | 2.49 | .84 |
| Parent school involvement | 1,812 | 0=never; 2=participates in all activities | .52 | .53 |
| Parent social supervision | 1,876 | 1=do not know; 5= a lot | 3.74 | .89 |
| Parent household rules | 1,880 | 1=never; 4=often for in all areas | 2.63 | .69 |
| Teacher expectations | 1,810 | 0=less than college; 1=college completion | .53 | .50 |
| <i><u>Academic disengagement</u></i> | | | | |
| Peer academic perception | 1,956 | 1=all items are not important; 3=all items are very important | 2.39 | .46 |
| Number of friends who dropped out of high school | 1,956 | 0=none; 1=one of more friends | .31 | .46 |
| Number of siblings who dropped out of school | 1,836 | 0=none; 1=one or more | .15 | .36 |
| School misbehavior | 2,036 | 0=did not misbehave; 1=misbehaved more than 10 times in all areas | .60 | .58 |

Table 3.3 (continued)

| Variable | N | Metric | Mean | Standard Deviation |
|---|-------|---|------|--------------------|
| School transfer | 2,033 | 0=never; 1=one or more | .00 | .04 |
| Arrested | 2,033 | 0=never; 1=one or more | .03 | .17 |
| <i>Future outlooks</i> | | | | |
| Student college expectations | 2,099 | 0=less than high school; 9=Ph.D., M.D. | 5.12 | 2.16 |
| <i>Student status between 1992 and 1994</i> | | | | |
| Employed but not enrolled in a postsecondary educational institution. (PSEFIRTY, LABFOR93) | 2,111 | 0=unemployed or in the armed forces; 1=employed | .91 | .28 |
| Joined the armed forces but not enrolled in a postsecondary educational institution. (BRANCH1, BRACH2, BRANCH3) | 2,046 | 0=unemployed or employed; 1=joined the armed forces | .06 | .23 |
| Never married. (MARSTAT) | 2,124 | 0=married, marry-like relationship; 1=never married or divorced | .75 | .43 |
| Number of dependent children. (DEPCHILD) | 1,733 | 0=none; 1=one or more | .18 | .38 |

Note: Descriptive statistics are weighted and adjusted for two-stage sampling design using the statistical program STATA. Unweighted sample size is reported. An Asterisk (*) denotes, means, not percentages as in the rest of the table. Missing values are excluded from calculation of means.

CHAPTER 4

WHAT EXPLAINS THE BLACK AND WHITE GENDER GAPS IN POSTSECONDARY ENROLLMENT AMONG “ON-TIME” ENROLLEES?

In this chapter, I explore two research questions: What is the magnitude of the black and white gender gap among potential “on-time” enrollees? And how well do academic preparation, family and school support, academic disengagement, and future expectations explain the gender gap in college enrollment among black and white high school graduates? To answer these questions, I examine the postsecondary destination of high school graduates, assess the magnitude of the gender gap in college enrollment, and explore how much of the black and gender gap is explained by student background characteristics. In the final step, I investigate the effects of academic preparation, parent and school support, academic disengagement, and future outlooks on the race by gender disparity in postsecondary enrollment after controlling for family and school characteristics.

To investigate these issues, I conduct both descriptive and multivariate analyses. The descriptive analysis offers an overview of the race by gender trajectories two years after high school completion and assesses the gender disparity in postsecondary enrollment across racial groups. Using multinomial logistic regression, I examine separately for blacks and whites the effects that various predisposition factors have on students' chances of going to a two- or four-year college versus not enrolling in any college. Several models are presented to monitor changes in the black and white gender

gaps. We are interested in whether the gender gap declines, increases, or becomes statistically nonsignificant as predisposition factors are introduced.

The expectation is that high school graduates with strong academic preparation will have the highest probability of enrolling in a four-year college soon after high school completion. Such a finding would support the academic preparation hypothesis which posits that differences in males' and females' academic preparation determine whether or not they enroll in a postsecondary educational institution. I also expect that academic preparation will have a weak effect on students' chances of enrolling in a two-year college since demonstration of prior academic excellence is typically not an admissions requirement at community colleges. At the community college level, I expect that the black and white gender gaps would be most affected by student background characteristics, parent and school support, academic disengagement, and future outlooks. I reason that those students with a weak academic background would enroll in a community college because despite not having the grades or test scores to earn admissions at a four-year college they are likely to have strong family and school support, be less disengaged with the educational process, and maintain expectations of continuing their education. The available research, however, does not adjudicate on which one of these competing hypotheses would have the greatest influence on the gender disparity in community college enrollment. The analysis presented will contribute to the literature on college enrollment by investigating how competing hypotheses affect the community college enrollment of black males, black females, white males, and white females.

Descriptive Statistics

Table 4.1 presents descriptive statistics for measures of student background characteristics, academic preparation, parent and school support, academic disengagement, and future outlooks. Percentages and means are calculated separately for the four race by gender groups. The results in Table 4.1 show that black and white high school graduates differ considerably by background characteristics. A greater proportion of black students compared to white students are foreign-born, do not live with both biological parents, have more siblings, and come from disadvantaged families as measured by their socioeconomic status (SES). More black students attend a high school that is public or urban or has a disproportionate number of minority students or a high concentration of poverty. However, within each racial group, males and females of each racial group did not differ by these measures, except in two-parent household and urban high school. Slightly more black males than black females live in homes with both biological parents. Fewer black males than black females attend schools that report being located in an urban community.

Across the three measures of academic preparation, black males fare much worse than any other group. Thirty percent of black males in the sample have repeated at least one grade. In sharp contrast to the other groups, black males are twice as likely as black females and white males and almost five times as likely as white females to repeat a grade. Although white males experience a relative advantage to blacks in grade retention, white males are also twice as likely as white females to repeat a grade. Black males and black females earn lower grades and lower scores on the standardized composite reading and mathematics tests than their white counterparts. Except for grade retention, the gender differences in academic preparation within each racial group are modest. This finding captures a broader trend noted since the 1980s in which girls'

academic progress has narrowed or in some cases reversed the gender gap in educational outcomes (Cornelius 2003; Mickelson 2003).

Consistent with the literature on parental involvement (Catsambis and Garland 1997), Table 4.1 shows that black and white high school graduates receive similar level of support from their parents. This includes similar reports of parental expectations for their children to attend a four-year college. Across race and gender, high school graduates also report similar levels of academic discussions with their parents and having parents that participate in school activities once or twice during the semester. Interestingly, across race and gender, students report the same level of parental social supervision. Black parents are not more likely than white parents to supervise and monitor their teens' whereabouts and neither black nor white parents supervise their daughters more than their sons. Multivariate analyses may reveal that while males and females report similar levels of parental supervision this form of parent involvement may be associated with educational outcomes differently for males and females (Muller 1998).

Contrary to some research (Ferguson 2001b), more black males and females (77% of black males and 74.4% of black females) report their favorite teacher or counselor has higher expectations for them than white students (66.8% of males and 70% of females). This finding indicates that black students perceive high expectations from school personnel and perhaps may not think that teachers or counselor treat black students in a biased manner.

Students' reports on peer influence reveal two different results. There are no racial or gender differences in the level of peers' perceptions of the importance of education. More black than white students have friends who dropped out of school. Specifically, more black females and males (30% of black females and 29% of black

males) have friends who dropped out of school than white females or males (19% of white females and 15% of white males). The last measure of academic disengagement considered is the frequency at which students misbehave in school. There are virtually no gender differences and only a slight racial difference in students' report of their level of school misbehavior.

Finally, black and white students report similar level of college expectations. Black males' and white males' scores translate into expectations that fall between college attendance at a four-year institution and a baccalaureate degree (value of 6.5). Black females' and white females' have educational expectations that are closer to anticipation of a bachelor's degree (score of 6.8). The small gender disparity favoring females is the same among blacks and whites. In contrast, there are substantial racial and gender differences in students' plans to join the armed forces. Black high school graduates are more likely than their white counterparts to plan to join the armed forces after high school. A greater proportion of black males (29%) than black females (17%), white males (17%), and white females (8.7%) plan to join the armed forces. These figures are in sharp contrast to the actual enlisting patterns of males shown in the following Table 4.2 in which 2% of all black males and 3% of all white males joined the armed forces.

The descriptive results confirm a well established finding in social science and that is that black students are less well off than white students on standard measures of SES, school poverty, and academic preparation. However, there is no racial difference in the average number of students reporting the level of support that they receive from their parents and school personnel, the level of importance that their friends place on academic excellence and completing school, how often they misbehave in school, and their educational expectations. Areas in which they differ substantially include academic preparation, number of peers who dropout of school, and plans to join the military. In these areas black males rank at the bottom, and black females rank somewhere in

between white males and white females. In following sections, I explore how the similarities and differences among the black and white students affect their postsecondary attendance. I begin first with an overview of the race and gender differences in the postsecondary trajectories of black and white high school graduates.

Table 4.1. Descriptive Statistics on High School Graduates by Race and Gender

| Variables | Black males | Black females | White males | White females |
|---|-------------|---------------|-------------|---------------|
| <i><u>Background characteristics</u></i> | | | | |
| Immigrant (0= U.S. Born) | 1.5% | 1.6% | .2% | .1% |
| Two parent household | 43.0 | 40.0 | 71.5 | 67.8 |
| Number of siblings* | 2.7 | 2.6 | 2.0 | 2.1 |
| (SD) | (1.7) | (1.8) | (1.4) | (1.4) |
| Socioeconomic Status | -.3 | -.3 | .2 | .2 |
| (SD) | (.8) | (.8) | (.7) | (.7) |
| Public school | 96 | 92.3 | 88.0 | 92 |
| School percent minority* | 4.6 | 5.0 | 1.9 | 1.9 |
| (SD) | (1.8) | (1.6) | (1.6) | (1.5) |
| School percent of students on free lunch* (SD) | 4.1 | 4.3 | 2.7 | 2.8 |
| (SD) | (1.8) | (1.8) | (1.8) | (1.8) |
| Urban school | 36.0 | 41.0 | 20.0 | 19.0 |
| <i><u>Academic Preparation</u></i> | | | | |
| Held back a grade | 30.0 | 15.1 | 12.0 | 6.3 |
| High school grades* | 5.7 | 6.7 | 7.2 | 7.9 |
| (SD) | (2.1) | (2.1) | (2.3) | (2.2) |
| Standardized reading and mathematics test scores* | 46.4 | 48.2 | 54.0 | 54.4 |
| (SD) | (8.4) | (9.3) | (9.4) | (8.8) |
| <i><u>Parent and school support</u></i> | | | | |
| Parent college expectations* | 5.3 | 5.8 | 5.5 | 5.6 |
| (SD) | (1.7) | (1.4) | (1.6) | (1.5) |
| Parent academic discussions* | 2.1 | 2.2 | 2.1 | 2.1 |
| (SD) | (.46) | (.03) | (.4) | (.4) |
| Parental school involvement* | .7 | .7 | .7 | .7 |
| (SD) | (.51) | (.04) | (.6) | (.6) |
| Parent supervision* | 3.9 | 4.0 | 3.8 | 4.0 |
| (SD) | (.8) | (.1) | (.8) | (.8) |

Table 4.1 (continued)

| Variables | Black males | Black females | White males | White females |
|--|-------------|---------------|-------------|---------------|
| Teacher expectations | 77 | 74.4 | 66.8 | 70 |
| <i>Academic disengagement</i> | | | | |
| Peer academic perception* | 2.5 | 2.6 | 2.4 | 2.6 |
| (SD) | (.46) | (.40) | (.5) | (.4) |
| Number of dropouts among peers | 29.0 | 30.0 | 15.0 | 19.0 |
| School misbehavior | .5 | .5 | .5 | .4 |
| (SD) | (.5) | (.42) | (.5) | (.5) |
| <i>Future outlooks</i> | | | | |
| Student college expectations* | 6.5 | 6.8 | 6.5 | 6.8 |
| (SD) | (1.8) | (1.9) | (1.9) | (1.8) |
| Plans to take the armed forces examination | 29 | 17.3 | 17.0 | 8.7 |
| N | 523 | 614 | 3,849 | 4,058 |

Note: Descriptive statistics are weighted and adjusted for two-stage sampling design using the statistical program STATA. Unweighted sample size reported at the end of the table. An Asterisk (*) denotes, means, not percentages as in the rest of the table and numbers in parentheses are standard deviation (SD) units. Missing values are excluded from calculation of means.

Research Question 1: What are the postsecondary trajectories of black and white high school graduates? And what is the magnitude of the gender gap among black and white “on-time” enrollees?

Table 4.2 presents a percent distribution of the postsecondary destination of high school graduates two years after their high school completion. The results show that most black and white high school graduates do enroll in some type of postsecondary institution soon after high school completion. However, black males enroll at a lower rate than black females, white males, and white females. It is important to note that despite their low college enrollment rate almost all black males who do not enroll in college report being employed during this period; this pattern is also consistent among the other groups of students who do not enroll in any postsecondary educational institution. Another category in which black males are disadvantaged is in the rate of unemployment. Black males as well as black females rank highest among students who do not go to college, work, or join the military two years after completing high school. Table 4.2 also shows that black males enlist in the military at a rate slightly lower (2% of black males) than white males (3% of white males). Contrary to a common perception, black males are not more likely to join the military (*New York Times* 2000), although they may report a desire to join the armed forces at a rate higher than other groups (Burbridge 1991).

Table 4.3 provides an in-depth examination of the postsecondary enrollment patterns of males and females by racial groups. The results show that there is a substantial gender gap in college enrollment among blacks but a less striking gender gap among whites. Forty-four percent of black males compared to 27% of black females do not enroll in any postsecondary educational institution. This is a gender gap of 17% favoring black females. Most of the gap is at the four-year college level; 10% fewer

black males than females enroll in a four-year college compared to a 7% gender gap that favors black females at the two-year college level.

In contrast, the gender gap among white students is substantially smaller than that observed among black students. Among white students, 30% of males compared to 23% of females do not enroll in any college. This seven percent gap is distributed at both levels of undergraduate education, although the gender gap is wider among enrollees in four-year colleges.

A comparison of the racial gap in college enrollment shows that the black-white distribution is more skewed between black males and white males than between black females and white females. Referring to Table 4.3, the college enrollment gap between black females and white females is highest at the four-year college level which differs by only four percent in favor of white females (43% of black females compared to 47% of white females). In contrast, the male enrollment gap in four-year colleges favors white males by almost 10 percent (33% of black males compared to 42% of white males). The male gap in community college enrollment also favors white males by 5 percent. This comparison shows that black males have the lowest enrollment rate in undergraduate institutions; their rate is 17% lower than black females, 14% lower than white males, and 21% lower than white females.

Together, Tables 4.2 and 4.3 reveal several trends in the postsecondary destination of "on-time" enrollees. Table 4.2 shows that students who do not go to college are engaged in meaningful activities after high school. Most high school graduates are working, but some join the military. Similar to other studies, it also shows that there is a racial gap in college attendance (Bennett and Xie 2000). More white than black high school graduates enroll in some type of college soon after high school completion. Contrasting the enrollment patterns of males and females separately by

racial groups disclose that the black-white gap in undergraduate enrollment is widest among males, thus indicating that the black-white difference can be largely attributed to black males' under-enrollment in postsecondary educational institutions. In the next section, I explore whether the observed race by gender gap is driven by social structural conditions measured by family and school characteristics.

Table 4.2. Postsecondary Trajectory between 1992 and 1994 by Race and Gender

| Postsecondary status | Black males | Black females | White males | White females |
|----------------------|-------------|---------------|-------------|---------------|
| College enrollment | 56% | 72% | 69% | 77% |
| Employment | 33% | 21% | 26% | 19% |
| Joined the military | 2% | 1% | 3% | 0% |
| None of the above | 8% | 7% | 2% | 3% |
| N | 523 | 614 | 3,849 | 4,058 |

Table 4.3. Postsecondary Enrollment Status between 1992 and 1994 by Race and Gender

| Postsecondary status | Black males | Black females | White males | White females |
|----------------------|-------------|---------------|-------------|---------------|
| Never enrolled | 44% | 27% | 30% | 23% |
| Two-year college | 23% | 30% | 28% | 30% |
| Four-year college | 33% | 43% | 42% | 47% |
| N | 523 | 614 | 3,849 | 4,058 |

Note: Descriptive statistics for Tables 4.2 and 4.3 are weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values are excluded from calculation of means. Columns may not add to 100% due to rounding. Unweighted sample size is reported.

Multivariate Analysis

Research Question 3: Do the black and white gender gaps persist after controlling for student background characteristics?

In this section I examine whether the black and white gender gaps in postsecondary enrollment persist after controlling for student background characteristics. Because the outcome variable has three values, I use multinomial logistic regression to examine two sets of responses: the odds of an individual attending a two-year PEI versus no enrollment in any college ($P_{2\text{year}}/P_{\text{never enrolled}}$) and the odds of attending a four-year PEI versus no enrollment in any college ($P_{4\text{year}}/P_{\text{never enrolled}}$). This analysis allows for the comparison of students who enroll in a two- or four-year college versus never enrolling in any postsecondary educational institution. The parameter estimates generated are exponentiated (e^{β}) to express the association between the independent variables and the odds ratio of a student attending a two-year or four-year PEI rather than no enrollment in any postsecondary educational institution (Plank and Jordan 2001). Odds ratios greater than one suggest that there is a positive association between an independent variable and attending college. In terms of the male coefficient, it would indicate that the gender gap favors males, that is, males are more likely than females to enroll in a college. Odds ratios less than one would reveal a male disadvantage in college enrollment. Specifically, it would mean that males are less likely than their female counterparts to enroll in a postsecondary educational institution. Odds ratios that equal one would indicate that there is no difference between males' and females' odds of college enrollment.

The Direct Effect of Gender

Table 4.4 reports the direct effect of gender on black students' and white students' odds of attending a two- or four-year college versus no college enrollment, without controlling for any student background characteristics except for gender. The results translate the findings of the preceding exploratory analysis in terms of odds ratios. Table 4.4 shows that black males' odds of going to college are about 50% less than those of black females at both two- and four-year colleges. Specifically, being a black male substantially decreases a student's odds of going to a two-year versus no college enrollment by 52% $[(1 - (\exp[\beta_{2\text{year}/\text{never enrolled}}] = .48)) * 100]$ compared to black females' odds of enrolling in a two-year college versus not going to college at all. The male disadvantage is about the same when we consider college attendance at four-year institutions $(51\% = [(1 - (\exp[\beta_{2\text{year}/\text{never enrolled}}] = .49)) * 100])$. Similar to black males, white males are also less likely to go to college than their female counterparts, but in contrast to black males the white male disadvantage is less severe. Among white students, the degree to which being a male decreases a student's chances of enrolling in an undergraduate institution is virtually the same whether we consider enrollment in two- or four-year colleges. Table 4.4 shows that white males are on average 31% less likely than white females to enroll in a two-year or a four-year college. In summary, although there are black and white gender gaps in college enrollment favoring young women, the black gender gap is more severe than that observed among whites. In other words, the odds of enrolling in a postsecondary educational institution is less favorable for young men, but particularly so for young black men.

Table 4.4. Odds of Black and White Students Enrolling in a Two- or Four-Year College Versus Not Pursuing a Postsecondary Education Controlling for Gender

| Gender gap | Black | | White | |
|-----------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .48*** | .49*** | .71*** | .68*** |
| Chi-square | 15.87*** | | 32.03*** | |
| Pseudo R ² | .01 | | .00 | |
| N | 1,137 | | 7,907 | |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. Unweighted sample size is reported. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Effect of Gender Controlling for Background Characteristics

Table 4.5 examines whether the black and white gender gaps persist after controlling for student background characteristics. The introduction of background characteristics shows that the odds of a black male enrolling in a two-year college are 54%¹⁵ lower than the odds of a black female enrolling in a two-year college. Except for gender, no other variable predicts black students' odds of enrolling in a two-year college. On the other hand, gender, number of siblings, socioeconomic status, and public school are statistically significant predictors of the odds of attending a four-year college versus no college enrollment among black high school graduates. Specifically, the odds of a black male enrolling in a four-year college versus not attending any college are 56% lower than the odds of a black female. Having one or more siblings and attending a public high school considerably reduce black students' odds of attending a four-year college, 11% and 89%, respectively. Higher socioeconomic status substantially increases black students' odds of attending a four-year college rather than not enrolling in any college. Note that this is the strongest predictor here (see semi-standardized odds ratios¹⁶ in Appendix B).

Referring to the model for white students, it is no surprise that the analysis yields many more statistically significant predictors than in the black model. This is the case because there are many more respondents in the white student sample, and statistical significance is easier to achieve in large sample sizes. The fact that many of the coefficients for black students are in the same direction to those of white students

¹⁵Compute $(1 - (\exp[\beta_{2\text{year}/\text{never enrolled}}] = .46) * 100)$.

¹⁶The odds ratios are "semi-standardized" because only the independent variables are converted to z-scores. The dependent variable is not standardized because a standard deviation change of a dichotomous variable is not interpretable (Pampel 2000). Although the dependent variable in question is a nominal variable with three values, the multinomial logistic regression converts this measure into two binary outcomes and thus makes its conversion to z-scores inappropriate.

suggests that with a larger sample size more measures of student characteristics would be significant for blacks.

Table 4.5 shows that among white high school graduates, being a male, having many siblings, and attending a high school with a high concentration of minority students lower the odds that a white student will enroll in a two- or four-year college. In addition, a white high school graduate who attends a high school that is either public or has a high proportion of students in the free lunch program is less likely to attend a four-year postsecondary educational institution. On the other hand, a white high school graduate who lives in a two-parent household or comes from non-poor families are more likely to enroll in a two- or four-year college.

Similar to the black gender gap, Table 4.5 shows that the white gender gap widens and remains statistically significant after controlling for demographic characteristics. Recall that a decline in the male odds ratio indicates a widening of the gender gap, and thus a more severe male disadvantage in college enrollment. Referring for a moment to the gender-only model in Table 4.4 and the control-only model in Table 4.5, note that at the two-year college level the black gender gap (expressed in odds ratios) widens modestly from 54% to 54% (odds ratios: .48 to .46) and at the four-year college level from 51% to 56% (odds ratios: .49 to .44), respectively. Similarly for whites, the gender gap widens at the two-year college level from 29% to 37% (odds ratios: .71 to .63) and at the four-year college level from 32% to 46% (odds ratios: .68 to .54) in Tables 4.4 and 4.5, respectively. These patterns reveal that the male disadvantage intensifies once background characteristics are introduced. Hence, the implication is that the black and white male disadvantage in college enrollment is affected by student background characteristics. Because the decline in the male coefficient between Tables 4.4 and 4.5 is greater for whites than for blacks it suggests that although black males are

least likely to go to college it is white males' college enrollment that is more sensitive to family and school background characteristics.

Table 4.5. Odds of Black and White Students Enrolling in a Two- or Four-Year College Versus Not Pursuing a Postsecondary Education Controlling for Background Characteristics

| Background characteristics | Black | | White | |
|--|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .46*** | .44*** | .63*** | .54*** |
| Immigrant | 1.49 | 2.55 | 1.64 | 1.57 |
| Two parent household | 1.27 | .89 | 1.26** | 1.78*** |
| Number of siblings | .90 | .89* | .91*** | .88*** |
| Socioeconomic Status | 1.17 | 2.39*** | 2.23*** | 5.85*** |
| Public school | .46 | .11*** | .70 | .42*** |
| School percent of students on free lunch | 1.00 | .95 | 1.05 | .91*** |
| School percent minority | .97 | 1.03 | .89*** | .93** |
| Urban ¹⁷ | 1.48 | 1.15 | .95 | 1.16 |
| Chi-square | 110.81*** | | 965.55*** | |
| Pseudo R ² | .09 | | .13 | |
| N | 1,137 | | 7,907 | |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using the multiple imputation software program, AMELIA. Unweighted sample size is reported. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

¹⁷Schools that are classified as suburban or rural are not statistically significant from each other and are not statistically significant predictors of college enrollment.

To investigate further why the black and white gender gap widened after introducing demographic characteristics, I assessed the relative importance of each control variable by examining its semi-standardized odds ratios. The model presented in Appendix B shows that socioeconomic status is the strongest predictor of college enrollment for both blacks and whites. This indicates that the increase in young males' disadvantage in postsecondary enrollment is largely driven by their family social class. I explored further whether the male disadvantage is consistent at different levels of SES. Tables 4.6 and 4.7 present the percent distribution of postsecondary enrollment by socioeconomic status for blacks and whites, respectively. Both tables report row percentages. Because SES is not a statistically significant predictor of black enrollment in two-year institutions, we have less confidence that the patterns observed at this level are representative of the population of black high school graduates. Instead, I focus on the SES pattern at the four-year college level since SES predicts enrollment in four-year colleges. Table 4.6 shows that among poor, middle-class, and affluent blacks, young black women are more likely than young black men to enroll in college, however mean differences are statistically significant only at the lowest and middle quartiles of SES. Failure to find statistical significance among affluent blacks may be due to the relative smaller sample of black students who fall in this category. Nevertheless, the black gender disparity in college enrollment is more likely to be severe among poor and lower-income families since a greater proportion of the black population compared to whites fall within these low-SES levels. In contrast, among whites the analysis shows that white males are less likely than white females to go to college, but this pattern is statistically significant only at the middle and highest SES quartiles.

These findings demonstrate that socioeconomic status masks the effect of gender on postsecondary enrollment in four-year colleges for both blacks and whites and in two-year colleges for whites. Two important aspects to note are that at the four-year college

level the white gender difference is more sensitive to socioeconomic status than the black gender gap. And second, the black and white gender gaps in college enrollment are statistically significant at different levels of SES. Black males from poor and low-income families enroll in college at a lower rate than their female counterparts. Among high-SES families, white males are less likely than white females to attend college. This pattern is also present among blacks but the gender difference is not statistically significant.

Despite the influence of SES on the black and white gender gaps, the fact that each group remains with a sizable gender gap, net of demographic characteristics, suggests that other aspects of students' experiences may be affecting the gender disparity in the "on-time" college enrollment of high school graduates. Perhaps, black and white males are more susceptible to "lived" experiences at home, in school, and among peers. These dimensions of the schooling process are explored in the next section in Tables 4.8 through 4.12.

Table 4.6. Percent Distribution of Postsecondary Enrollment Status by Socioeconomic Status of Black Male and Female High School Graduates

| Socioeconomic Status | Males | | | Females | | |
|--------------------------------|------------|----------|-----------|------------|----------|-----------|
| | No College | Two-Year | Four-Year | No College | Two-Year | Four-Year |
| Lowest quartile ¹⁸ | 59% | 18 | 22 | 32% | 42 | 26 |
| Middle quartiles ¹⁹ | 43% | 23 | 34 | 25% | 27 | 48 |
| Highest quartiles | 8% | 34 | 58 | 18% | 11 | 72 |
| N | | 523 | | | 614 | |

Table 4.7. Percent Distribution of Postsecondary Enrollment Status by Socioeconomic Status of White Male and Female High School Graduates

| Socioeconomic Status | Males | | | Females | | |
|---------------------------------|------------|----------|-----------|------------|----------|-----------|
| | No College | Two-Year | Four-Year | No College | Two-Year | Four-Year |
| Lowest quartile | 61% | 23 | 16 | 56% | 28 | 16 |
| Middle quartiles ²⁰ | 36% | 32 | 32 | 24% | 36 | 40 |
| Highest quartiles ²¹ | 10% | 24 | 66 | 7% | 21 | 73 |
| N | | 3,849 | | | 4,058 | |

Note: Descriptive statistics for Tables 4.6 and 4.7 are weighted and adjusted for two-stage sampling design. Missing values are excluded from calculation of means. Row percentages may not add to 100 due to rounding. Unweighted sample size is reported.

¹⁸Black males' and females' mean difference across SES lowest quartile is statistically significant at $p < .001$.

¹⁹Black males' and females' mean difference across SES middle quartiles is statistically significant at $p < .01$.

²⁰White males' and females' mean difference across SES middle quartiles is statistically significant at $p < .001$.

²¹White males' and females' mean difference across SES highest quartile is statistically significant at $p < .05$.

Research Question 4: Controlling for student background, what impact do academic preparation, parental support, school support, academic disengagement, and future outlooks have on the black and white gender gaps?

To answer this question, I present five multinomial logistic regression models. Controlling for student background characteristics, each of the first four models analyzes a set of predisposition factors that corresponds to one of the four hypotheses introduced in Chapter Two. Model I considers indicators of academic preparation. Model II introduces measures of parent and school support. Model III analyzes indicators of academic disengagement, and Model IV includes measures of student future outlooks. The purpose of this analysis is to identify the effect that each hypothesis has on the black and white gender gaps. The results will assist us in understanding the mechanisms behind the final model in which all of the predisposition factors are considered simultaneously. Consistent with the previous analyses, regression models are conducted separately for black and white students.

Academic Preparation Hypothesis

Table 4.8 presents two separate regressions for black and white high school graduates that examine whether the black and white gender gaps in college enrollment are explained by differences in academic preparation, controlling for high school graduates' background characteristics. The model for black students shows that indicators of academic preparation have virtually no effect on the gender difference in community college enrollment among blacks with similar family and school characteristics. While it is true that the black gender gap at the community college level declines somewhat from its value in the control-only model in Table 4.5, it is important to note that none of the indicators of academic preparation are statistically significant.

However, the coefficients of academic preparation are in the same direction to that observed for whites suggesting that with a larger sample size the indicators of academic preparation may become statistically significant predictors of black enrollment in community colleges. The magnitude of the odds ratios suggests that the effects of academic background on black enrollment at the community college level would be much weaker than those observed for whites.

In contrast, the black gender gap in four-year college enrollment is explained entirely by academic preparation, controlling for black students' background characteristics. Although each of the academic indicators affects the black gender gap, analysis of their individual contribution reveals that among students of similar family and school characteristics, high school grades alone explain black males' under-enrollment in four-year colleges (see Table C.1 in Appendix C). However, separate regressions for held back a grade and test scores show that each measure has a strong effect on the black gender gap after controlling for student background. This is indicated by the reduction of the male coefficient and the drop in significance level from the control-only model in Table 4.5 (see Table C.1 in Appendix C).

Together, these findings offer support to the academic preparation thesis at the four-year college level. They suggest that poor academic preparation is the primary factor for explaining the gender disparity in black college enrollment.

Table 4.8 shows that over and above family and school characteristics, academic preparation partially explains the white gender difference in college enrollment in two-year institutions. Referring for a moment to the control-only model in Table 4.5, we observed that a white male's odds of going to a two-year college are 37% lower than those of a white female. Table 4.8 shows that among students of similar family and school background, the introduction of academic preparation improves a white male's

chances of going to a community college versus no college enrollment by 16%²² higher of what it was in the control-only model in Table 4.8. This pattern indicates that academic preparation plays an important role in channeling white males and females into enrollment in community colleges.

Similar to black high school graduates, academic preparation explains a considerable proportion of the white gender disparity in the college enrollment at the four-year level. Table 4.8 shows that the odds of a white male enrolling in a four-year college versus not going to any college are 27% lower than the odds of a white female. The improvement in the odds of a white male enrolling in a four-year college versus no college enrollment after controlling for background characteristics *and* academic preparation represents an increase of 43%²³ of what it was in the control-only model in Table 4.5. In addition, analysis of the effect of each indicator of academic preparation on the gender gap shows that similar to blacks, high school grades explain most of the white male disadvantage in college attendance (see Table C.2 in Appendix C). As with black students, the findings on white students show that academic preparation explains a substantial proportion of young white men's disadvantage in college enrollment, particularly at the four-year college level. We do not know, however, whether the effect is explained by white males' poor academic preparation or a differential payoff of academic preparedness on college entry that varies by gender. This research problem is explored in Chapter 5.

Overall, the findings of Table 4.8 support the academic preparation hypothesis that academic preparation plays a crucial role in the gender disparity of college

²²Compare male odds ratios for two-year college versus no enrollment in Tables 4.5 and 4.8 and compute: $[(.73-.63)/.63]*100$.

²³Compare male odds ratios for four-year college versus no enrollment in Tables 4.5 and 4.8 and compute: $[(.77-.54)/.54]*100$.

enrollment. This hypothesis is supported only at the four-year college level for young black men and women and at both levels of undergraduate enrollment for young white men and women. Because there is a considerable gender gap that remains unexplained after controlling for student background and academic preparation at the two-year college level for both blacks and whites and at the four-year college level for whites, in the following sections I investigate how parent and school experiences as well as outlooks affect the gender disparity in postsecondary enrollment.

Table 4.8. Odds of Black and White Students Enrolling in a Two- or Four-Year College Versus Not Pursuing a Postsecondary Education Controlling for Background Characteristics and Academic Preparation

| Academic Preparation | Black | | White | |
|---|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .50** | .71 | .73*** | .77** |
| Repeated a grade | .92 | .54* | .87 | .55*** |
| High school grades | 1.05 | 1.44*** | 1.24*** | 1.67*** |
| Standardized composite of reading and mathematics test scores | 1.01 | 1.05** | 1.02*** | 1.08*** |
| Chi-Square | 204.43*** | | 1,538.08*** | |
| Pseudo R ² | .16 | | .26 | |
| N | 1,137 | | 7,907 | |

Note: Each model controls for immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using the multiple imputation software program AMELIA. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Parent Support and School Support Hypotheses

Table 4.9 focuses on the effects of parent and school support on the black and white gender gaps. Four indicators of parent support are examined: parent educational expectations, parent academic discussions, parent school involvement, and parent social supervision²⁴. Only two parent indicators are significant predictors of college entry for black students. Among black high school graduates, the black male coefficient remains virtually unchanged in predicting both levels of undergraduate enrollment. Among white high school graduates, the white gender gap is reduced by 7% at the two-year college level and by 9% at the four-year college level of what it is in the control-only white model in Table 4.5. This pattern suggests that the white male disadvantage in college enrollment is partly explained by parental involvement in schools and teacher/counselor future expectations. It is important to note that these results are less dramatic than those produced by academic preparation and that they do not control for academic preparation.

Although parent and school support do not explain a substantial proportion of the black and white gender disparities in the college enrollment, Table 4.9 shows that these measures do have strong direct effects on the enrollment of black and white high school graduates controlling for gender and other student characteristics. Table 4.9 shows that while none of the measures of parent and school support predict black enrollment in two-year colleges, two measures of parent support are statistically significant predictors of black enrollment in four-year colleges. Young black men and women, whose parents expect a postsecondary education, are more likely to enroll in a four-year college than students who do not report such parental expectations [$\beta_{4\text{year}/\text{never enrolled}}=1.24$). Similarly, black students whose parents are actively involved in school are more likely to go on to a

²⁴Excluded from all subsequent analyses are indicators for parental academic supervision (that is, checking and helping with homework) and parent household rules because neither indicator was a statistically significant predictor of enrollment in two- and four-year colleges across all models.

four-year college ($\exp[\beta_{\text{4year/never enrolled}}]=1.71$) than black students whose parents are not involved in school.

As in previous models, the white model has many more statistically significant predictors than the black model. The fact that the coefficients of parent and school support for black students are in the same direction and similar in range to those of whites suggests that with a larger black sample many more indicators of support may become significant predictors of black postsecondary enrollment.

The white model in Table 4.9 shows that many indicators of parent support predict college enrollment in two- and four-year colleges. White students who perceive that their parents expect their teens to attend college and support their teens' academic progress through discussions are more likely to enroll in a two- or four-year college rather than not attend any postsecondary educational institution, net of student background characteristics. Parent school involvement also improves the likelihood that a white student would enroll in a four-year college. In contrast, parent social supervision, which measures how much students' perceive that their parents monitor free time, spending habits, and activities with friends, is not a significant predictor of undergraduate enrollment for neither blacks nor whites. Table 4.9 also shows that teacher expectations predict white enrollment in two- and four-year colleges, controlling for gender, other student background characteristics and indicators of parent support.

The sponsorship hypothesis argues that black males are less likely to go to college because they receive less support from their parents, teachers, and other school staff. The rationale is that black males receive less support because they face greater academic difficulties than black females and given limited economic resources their families and school may choose to focus on those students who are more likely to succeed. The findings from Table 4.9 do not support entirely the sponsorship claim. The results

demonstrate that indicators of family and school support do not have substantial effects on the black gender disparity in college enrollment, and therefore does not explain the disproportionate rate at which black males do not enroll in two- or four-year institutions of higher education. Parent and school support do explain a modest proportion of the white gender disparity in college enrollment. However, a comparison of the effects of academic preparation and family and school support on the white gender gap clearly shows that while adult support is important in reducing the white gender gap, academic preparation plays the strongest role in explaining white males' disadvantage in access to higher education. In addition, the effects of parent and school support demonstrate that although adult support does not strongly affect the black or white gender gap, it does have a substantial effect on whether or not a black or white student enrolls in a postsecondary educational institution.

It is important to note that the analyses on the sponsorship hypothesis and the analyses in the next two sections on academic disengagement and future outlooks do not control for student academic achievement. I have conducted the analysis in this manner to highlight the contribution that each set of predisposition factors makes to the black and white gender gaps in college enrollment, and thus provide a foundation for understanding the final model in Table 4.12 in which all the college predisposition factors are considered simultaneously.

Table 4.9. Odds of Black and White Students Enrolling in a Two- or Four-Year College Versus Not Pursuing a Postsecondary Education Controlling for Background Characteristics and Adult Support

| Parent and school support | Black | | White | |
|-----------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .48*** | .45*** | .68*** | .60*** |
| Parent college expectations | 1.08 | 1.24** | 1.18*** | 1.61*** |
| Parent academic discussions | 1.11 | 1.35 | 1.38** | 1.61*** |
| Parent school involvement | 1.17 | 1.71** | 1.12 | 1.80*** |
| Parent social supervision | 1.03 | 1.03 | 1.05 | 1.01 |
| Teacher expectations | 1.62 | 1.48 | 1.26*** | 1.83*** |
| Chi-Square | 158.19*** | | 1,314.31*** | |
| Pseudo R ² | .11 | | .19 | |
| N | 1,137 | | 7,907 | |

Note: Each model controls for immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Academic Disengagement Hypothesis

Table 4.10 presents the effects of academic disengagement on the postsecondary enrollments of black and white students, controlling for students' demographic characteristics. The indicators are peer academic perception, number of peers who dropped out of school, and school misbehavior. None of the indicators of academic disengagement affects the black gender gap in two- or four-year college enrollment. However, number of peers who dropped out of school and school misbehavior do have significant direct effects on black attendance at a four-year college controlling for gender and other demographic characteristics. Black students whose peers have low educational attainment measured by whether or not they dropped out of high school are less likely to enroll in a four-year college than black students who do not have friends who dropped out of school²⁵. In addition, school misbehavior is negatively associated with black college enrollment in four-year institutions. The magnitude of their effects is substantial. The odds of a black male or female enrolling in a four-year college are 41% and 50% lower whether he or she has friends who dropped out of school or misbehaves in school, respectively.

Table 4.10 shows that peer academic perception, number of dropouts among peers, and school misbehavior have modest effects on the white gender gap and all three measures have strong effects on white students' enrollment in two- and four-year institutions, controlling for student demographic characteristics. Specifically, having friends who believe that it is important to go to classes regularly, study, get good grades, finish school, and continue one's education after high school improves a white student's odds of college enrollment by 52% in a two-year institution ($52\% = (1 - \exp[\beta_{2\text{year}/\text{never enrolled}}] = .48) * 100$) and 91% in four-year institutions ($91\% = (1 - \exp[\beta_{4\text{year}/\text{never}}$

²⁵Excluded from all subsequent analyses is number of siblings who dropped out of school because it was not a statistically significant predictor of enrollment in two- or four year colleges across all models for blacks and whites.

enrolled]=1.91)*100) versus no college enrollment. In contrast, having friends who dropped out of school diminish the odds of a white high school graduate enrolling in a two- and four-year college by 26% and 59%, respectively. Similarly, school misbehavior has a significant but negative effect on the odds of a white student enrolling in either a two-year or four-year college.

The analysis on the academic disengagement hypothesis examined whether peers academic perception, friends who dropped out of school, and school misbehavior produce an anti-achievement culture that deters students, particularly black males, away from pursuing a postsecondary education. While measures of academic disengagement affect both black and white students' college enrollments, it does not support the claim that the under-enrollment of black males in particular is a result of an anti-achievement peer culture that devalues education. Indicators of academic disengagement affect the white gender gap in college enrollment but their effects are modest and similar in magnitude to those produced by family and school support. In summary, the results provide no support of the academic disengagement hypothesis as it relates to the black gender gap, but they provide some weak support as it relates to the white gender difference in postsecondary enrollment.

Table 4.10. Odds of Black and White Students Enrolling in a Two- or Four-Year College Versus Not Pursuing a Postsecondary Education
Controlling for Background Characteristics and Academic Disengagement

| Academic disengagement | Black | | White | |
|---------------------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .47*** | .45*** | .68*** | .61*** |
| Peer academic perception ^a | 1.35 | 1.18 | 1.52*** | 1.91*** |
| Number of dropouts among peers | .86 | .59* | .82* | .41*** |
| School misbehavior | 1.15 | .50** | .75*** | .48*** |
| Chi-Square | 127.34*** | | 1,105.96*** | |
| Pseudo R ² | .10 | | .16 | |
| N | 1,137 | | 7,907 | |

Note: Each model controls for immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ^a=Peer academic perception is coded so that high values indicate positive academic outlook. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Future Outlooks Hypothesis

Lastly, Table 4.11 introduces student future outlooks while controlling for family and school characteristics. Future outlooks are measured by student educational expectations and plans to join the armed forces. These indicators have significant effects on the black and white gender gaps in two- and four-year postsecondary enrollment. Specifically, a black male's chances of enrolling in a two- or four-year college rather than not enrolling in a college are 46% and 44% lower, respectively, than the odds of a black female, controlling for background characteristics. Although black males' odds are substantially less than those of black females, it is apparent that the introduction of future outlooks improves a black male's chances of college enrollment from what they were in the control-only model in Table 4.5. Specifically, a black male's disadvantage is reduced by 17%²⁶ at the two-year level and 27% at the four-year level, once future outlooks are considered in addition to student demographic characteristics. This finding indicates that the black gender gap in community colleges is influenced by educational expectations and plans to join the armed forces.

The white male coefficient also increases once future outlooks and demographic characteristics are considered compared to the white male coefficient in the control-only model in Table 4.5. The increase in the male odds ratio between the control-only white model in Table 4.5 and the control plus future outlooks model in Table 4.11 indicates that the introduction of future outlooks improves the odds of a white male enrolling in a college by 14% at the two-year level and 33% at the four-year level relative to the odds of a white female. An important aspect to note is that academic preparation exerts the strongest influence on the white gender gap, followed by future outlooks in enrollment in two- and four-year colleges. Similar to the findings observed for black males, these

²⁶Compare black male odds ratios in Table 4.5 and Table 4.11 and compute: $17\% = [(0.54 - 0.46) / 0.46]$

findings suggest that white males' college enrollment is explained in part by educational expectations and future plans to join the armed forces.

Table 4.11. Odds of Black and White Students Enrolling in a Two- or Four-Year College

**Versus Not Pursuing a Postsecondary Education
Controlling for Background Characteristics and Future Outlooks**

| Future outlooks | Black | | White | |
|----------------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .54*** | .56* | .72*** | .72*** |
| Student educational expectations | 1.25*** | 1.48*** | 1.34*** | 2.15*** |
| Plans to join armed forces | .50* | .41*** | .88 | .72* |
| Chi-Square | 159.96*** | | 1,376.62*** | |
| Pseudo R ² | .13 | | .21 | |
| N | 1,137 | | 7,907 | |

Note: Each model controls for immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Full Model

Table 4.12 considers simultaneously all the predictors evaluated previously. The black and white models reveal that only a few of the effects present in the previous models remain statistically significant in the full model. At the two-year college level, gender, student educational expectations, and plans to join the armed forces are the only statistically significant predictors of black college enrollment. We know from the previous analyses that the effects of educational expectations and future military plans explain most of the black gender disparity in community college enrollment.

An assessment of the semi-standardized odds ratios (see Model IV in Appendix D, Table D.1) of black enrollment in community colleges show that the black college attendance is explained, in order of importance, by student educational expectations, plans to join the military, and gender. Although the black male disadvantage is substantially reduced, a gender gap remains that is not explained by the predisposition factors considered at the two-year college level.

Similar to blacks, the white gender gap in community college enrollment remains statistically significant in the full model but it is smaller than its original value in the control-only model. Consistent with previous findings, the full model shows that the white male disadvantage is less severe than that observed for black males. Many more indicators are statistically significant predictors of white enrollment in community colleges. The most powerful predictors are socioeconomic status and high school grades (they exert an equal influence, see semi-standardized odds ratios in Appendix D), followed by student educational expectations, test scores, and positive peer academic perception. From previous analyses, we know that socioeconomic status, high school grades and future outlooks are key factors that explain the white gender disparity in community college enrollment.

At the four-year college level, the black gender gap is not statistically significant. We know from previous analyses, that this effect is entirely explained by academic preparation, and specifically by high school grades. Among whites, the gender gap is also not significant. Analyses in Tables 4.8 through 4.11 demonstrate that the white gender gap is largely reduced by academic preparation. The introduction of adult support, academic disengagement, and future outlooks also contributes to the reduction in the gender disparity in college enrollment (see sequential models in Appendix D). Collectively, these measures of college predisposition reduce the white gender gap to non-statistical significance.

The direct effects of college predisposition factors on college enrollment reveal other interesting findings. For example, several measures of student background are significant predictors of white college enrollment in four-year institutions. White students from a two-parent household or an affluent family are more likely to enroll in a four-year college than white students who come from other family arrangements or poor, working class families. In addition, white students who have many siblings and attend a public or poverty-stricken high school are less likely to enroll in a four-year college than white students with few siblings and who attend a private or affluent high school.

In contrast, whether or not a student attends a public high school is the only background indicator that predicts black college enrollment in four-year institutions. The odds of a black graduate from a public high school enrolling in a four-year college are 86% lower than the odds of a black graduate from a private high school. The negative effect of attending a public high school is substantial, although it is the fourth strongest predictor of black college enrollment in four-year institutions, net of student background characteristics and other aspects of college predisposition (see Model IV in Appendix D: Table D.1). This substantial, negative public school effect may be a proxy for the organizational features of the schools that many black students attend due to poverty and

racial segregation, although as the full model shows attending a school with a high proportion of non-white students is not in-of-itself a disadvantage in students' path to college enrollment. School type may capture the disparities between private and public high schools' organizational structure that relate to when students begin the college planning process and how much assistance they receive in identifying their college options, completing college applications, and securing financial aid (McDonough 1997). It is important to note that it is difficult to determine whether or not school characteristics reflect differences in resources because no analysis of selection bias was conducted to control for whether the more academically gifted black students are selected out of public high schools to attend private high schools.

Academic preparation affects black and white college enrollment in a similar pattern. High school grades and test scores are positively associated with four-year college enrollment for both black and white high school graduates. Held back a grade is negatively associated with attendance at four-year colleges, although it missed statistical significance at the 95% confidence level; its p-value is .06. The models presented in Appendix D in which each set of college predisposition factors is entered sequentially show that held back remained a significant predictor of black students' college enrollment in four-year institutions until the final step in which educational expectations and plans to join the armed forces were entered. This finding suggests that being held back may affect black males' perception of what is possible for their future. Perhaps black males may assess being held back as a marker of their academic capabilities. This assessment may deter black males from pursuing a postsecondary education despite persisting through high school successfully. An important aspect to note is that there are racial differences in the differential effects of academic preparation on college enrollment; the positive effects are greater among whites and the negative effects are more severe among blacks.

The effects of parent and school support on black and white enrollments in four-year colleges shown in Table 4.9 are reduced or become nonsignificant in the full model in Table 4.12. While parent college expectations, academic discussions, and teacher expectations remain positive predictors of white enrollment in four-year colleges, only parent school involvement remains a significant predictor of black enrollment in four-year colleges. It is important to note that parent school involvement is the second strongest predictor of black college enrollment in four-year institutions and its effect is stronger on black college enrollment than on white college enrollment in four-year institutions (compare semi-standardized ratios in Model IV in Appendix D, Tables 1 and 2).

Although teacher expectations do not predict black enrollment in four-year colleges in the full model, additional analyses in Appendix E show that the effect of school support on black students' enrollment in four-year institutions is entirely mediated by academic preparation, parent support, and future outlooks. In contrast, among whites, teacher expectations is a significant predictor of college enrollment in four-year institutions, although its effect was substantially reduced by academic preparation and the other indicators of college predisposition. These results suggest that during high school the expectations of teachers and counselors are likely to reflect the academic and social resources that a black or white student already possesses. A teacher or counselor may not feel that he or she can be efficacious in directing a black or white student's postsecondary trajectory if by the 10th grade a student's is not doing well academically, lacks substantial parental support, or does not desire to go to college.

Another interesting finding in the full model is the absence of a significant effect of academic disengagement on black enrollment in four-year institutions. Previous analysis in Table 4.10 shows a negative effect of peers who dropped out of school and school misbehavior on black enrollment in four-year colleges. In Appendix F, I show

that the negative association between college enrollment and peers who dropped of school and school misbehavior is completely explained by how well a student performs academically. In addition, the effect of peers who dropped out academically is also explained by a black student's educational expectations. These results indicate that disengaged students are likely to be students who are not doing well academically or do not expect to further their education. Moreover, the fact that the effects of academic preparation and future outlooks are not substantially reduced after controlling for student background and academic disengagement (see Appendix G), although the effects of disengagement are entirely explained by academic and outlook indicators, suggests that academic excellence more than compensates or shields students from negative peer influences (Cook and Ludwig 1997) or disciplinary problems. This implies that academic disengagement is more likely to be an outcome rather than a catalyst of poor academic performance and future outlooks.

Among whites, having peers with a positive perception about the importance of education and doing well in school is positively associated with enrollment in two- and four-year institutions. Having friends who dropped out of school is negatively associated with enrollment in four-year colleges. In contrast to blacks, previous analyses have shown (refer to Table 4.10) that academic disengagement modestly affects the white gender gap (see sequential models in Appendix D).

Finally, effects of future outlooks follow a similar pattern among blacks and whites. Black and white students who expect to earn a college education are more likely to enroll in either a two- or four-year college. As discussed previously, plans to join the armed forces have a negative effect on college enrollment for black and white students. However, the negative effect is more severe among blacks.

Overall, the full model lends support to the academic preparation and future outlooks hypotheses with respect to the black gender gap, and all four hypotheses, although not equally, with respect to the white gender gap. At the two-year college level, the findings show that educational expectations and plans to pursue endeavors outside of higher education may draw black males away from college enrollment immediately after high school. The results also give credence to the proposition that black males are not as likely to go to college because they may be poorly prepared to meet the academic demands of four-year postsecondary educational institutions. Both sets of findings are robust in that they remain after controlling for background characteristics and other aspects of college predisposition. The analyses also reveal that these effects are not unique to black males. White males are less likely to enroll in two- and four-year college because of a combination of low academic preparation and plans to pursue career alternatives to postsecondary education immediately after high school. Adult support and academic disengagement are also associated with the gender disparity in white college enrollment in four-year institutions. However, these effects are modest when compared to those of academic preparation and future outlooks.

Table 4.12. Full Model. Odds of Black and White Students Enrolling in a Two- or Four-Year College Versus Not Pursuing a Postsecondary Education

| College Predisposition Factors | Black | | White | |
|--|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .54** | .80 | .82* | .91 |
| <i>Background Characteristics</i> | | | | |
| Immigrant | 1.11 | 1.72 | 1.71 | 1.36 |
| Two parent household | 1.41 | .93 | 1.17 | 1.36*** |
| Number of siblings | .88 | .89 | .92** | .89*** |
| Socioeconomic Status | .97 | 1.31 | 1.74*** | 2.90*** |
| Public school | .67 | .14*** | .81 | .55** |
| School percent minority | .98 | 1.00 | 1.06* | .94 |
| School percent of students on free lunch | 1.00 | .96 | .88*** | .93* |
| Urban | 1.42 | 1.33 | .96 | 1.21 |
| <i>Academic preparation</i> | | | | |
| Repeated a grade | .94 | .59+ | .91 | .62** |
| High school grades | 1.03 | 1.39*** | 1.18*** | 1.52*** |
| Standardized reading and mathematics test scores | 1.00 | 1.04* | 1.01* | 1.07*** |
| <i>Parent and school support</i> | | | | |
| Parent college expectations | 1.01 | 1.14 | 1.03 | 1.08* |
| Parent academic discussions | 1.04 | 1.06 | 1.08 | 1.16 |
| Parent school involvement | 1.26 | 2.16** | 1.07 | 1.57*** |
| Parent social supervision | .96 | 1.02 | 1.04 | .98 |
| Teacher expectations | 1.41 | .96 | 1.10 | 1.45*** |

Table 4.12 (continued)

| College Predisposition Factors | Black | | White | |
|--------------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| <i>Academic disengagement</i> | | | | |
| Peer academic perception‡ | 1.11 | .93 | 1.22* | 1.28* |
| Number of dropouts among peers | .93 | .73 | 1.00 | .69*** |
| School misbehavior | 1.12 | .68 | .93 | .98 |
| <i>Future outlooks</i> | | | | |
| Student college expectation | 1.21** | 1.24** | 1.21*** | 1.53*** |
| Plans to join armed forces | .49** | .36*** | .87 | .67** |
| Chi-Square | 307.86*** | | 1,928.49*** | |
| Pseudo R ² | .21 | | .30 | |
| N | 1,137 | | 7,907 | |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ‡=Peer academic perception is coded so that high values indicate positive academic outlook. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05. +=statistically significant at p=.06.

Discussion

The focus of this chapter was to investigate whether academic, family, school, and disposition factors make a difference in the race by gender disparities in college enrollment and examine whether the gender patterns observed are similar across racial groups. The following two questions were explored: What explains the black and white gender gaps in postsecondary enrollment among “on-time” enrollees? And a related question, is there a racial difference in the differential paths that males and females pursue after high school completion? The analyses were conducted by assessing the magnitude of gender gap in postsecondary enrollment and then evaluating separately the effects that student background characteristics, academic preparation, parent and school support, academic disengagement, and future outlooks have on the gender gap across racial groups. The purpose of examining separately the contribution of each set of college predisposition factors was to better understand the mechanisms underlying the full model in which all the predictors are considered simultaneously.

The trajectories of black and white high school graduates reveal that the majority of high school graduates enroll in a postsecondary educational institutional immediately after high school, and those who do not are employed or enlisted in the armed forces. Despite this trend, black males have the lowest college enrollment rate compared to the other groups and account for virtually all of the black-white gap in college enrollment in two- and four-year institutions. It is important to note, however, that most black males who do not enroll in a college soon after high school completion report being employed.

One possible explanation for the huge disparity between black males' college enrollment and those of other students centers on the structural conditions which shape the educational experiences of black children. A higher proportion of black families than white and Latina families live below the poverty level and are headed by black women (Hoffman *et al.* 2003). Moreover, more black than white or Latina female-headed

households also live below the poverty level (Hoffman, *et al.* 2003). The conditions under which the black family survives suggest that the lack of adult male role models and living below the poverty level may gendered the negative consequences of growing up in disadvantage families and neighborhoods, resulting in fewer black boys excelling in school and pursuing a postsecondary education.

I explored this explanation by conducting bivariate and multivariate analyses on the race by gender by SES difference in college enrollment. The findings show that black females outpace black males at every level of SES, although the results are only statistically significant at low levels of SES and for predicting enrollment in four-year colleges. In contrast, poor white males are not less likely than poor white females to persist through higher education. Among middle-class and affluent whites, the gender difference in college attendance is significant and favors females. These results demonstrate that black males are disadvantaged at low-levels of SES and white males at high-levels of SES. Despite these associations, the multivariate analyses show that SES explained very little of the black and white gender disparities in college enrollment, suggesting that other predisposition resources may explain the gender gaps.

While most aspects of college predisposition considered affect the college enrollment patterns of black and white high school graduates, only academic preparation and future outlooks substantially explain the black and white gender gaps in college entry. Specifically, the black gender gap in college enrollment in four-year institutions is entirely accounted for by grade retention, high school grades, and performance in reading and mathematics achievement tests. Among these three predictors, high school grades entirely explain the black gender gap. Grade retention (or held back a grade) remains a negative predictor of black college enrollment until indicators of future outlooks were introduced in the full model. This finding suggests that the negative effect of grade retention is embodied in students' sense of possibilities for their future.

Similarly, among whites, academic preparation explains a substantial proportion of the white gender gap in college enrollment in two- and four-year institutions. The full model predicting four-year college entry shows that high school grades explain most of the white gender disparity. Test scores are also a positive predictor but increase moderately black and white students' chances of college enrollment. Grade retention remains a negative predictor of four-year college enrollment, net of student background characteristics and other predisposition factors.

One interpretation of these findings takes a developmental perspective. It suggests that males' poor academic outcomes during their early years of schooling influence their academic progress and overall orientation towards education later in high school. For example, while held back, an indicator that was measured prior to students entering high school, is considered by many teachers as an intervention to remediate achievement, the developmental perspective suggests that such intervention may have serious long-term consequences on a student's self-esteem, socio-emotional adjustments, and academic progress (Jimerson *et al.* 2002). Students who are held back are separated from their peer group and get re-assigned to a younger, less academically advanced cohort. Students and black males in particular may experience this event as an indictment of their capabilities relative to their modal grade peer group. Through this process, black males and white males may complete high school too poorly prepared for postsecondary education. But because black males held back more often, they are less likely to pursue a college education.

An alternative interpretation of these findings is that poor academic performance is evidence of black males' disinvestment in their academic development. This study's does not examine whether academic disengagement is a predictor of academic preparation. However, academic disengagement is measured directly by peers' negative perception of education, number of friends who dropped out of school, and disciplinary

problems in school. If these factors were present early in students' educational careers and embodied in their academic preparation, then surely these factors would also be present during high school when black adolescents are more likely to develop an oppositional disposition towards education as they become more aware of the employment barriers that black adults face in the labor market (Downey and Ainsworth-Darnell 2002). In the full model, none of the measures of academic disengagement predicts two- or four-year college enrollment for black students. However, peer perception and friend who dropped out of school are negatively related to white college enrollment in two- and four-year colleges, and they modestly explain the white gender gap. These results suggest that the academic disengagement hypothesis holds but only for explaining the college enrollment of whites.

Although parent and school support does not have strong effects on the black or white gender gap, adult support does affect the college entry of black and white students. Parental school involvement is related to both black and white college enrollment in four-year institutions but the association is stronger for black students. In addition, parental college expectations and teacher/counselor expectations are also positively related with white enrollment in four-year institutions. These results suggest that black and white students benefit from adult sponsorship at home and in school. The parental practices that are more effective are those that are connected with expectations and school activities. Presumably through school activities, parents are able to gather important information about the college process from other parents and teacher. Moreover, students may feel encouraged by their parents support. The following chapter will explore whether this type of parental involvement is more important for males or females across racial groups.

Lastly, the findings also give credence to the future outlook hypothesis at the community college level. This hypothesis argues that black males are less likely to go to

college because they plan to pursue an alternative to postsecondary education immediately after high school. Table 4.11 and Appendix D demonstrate that student educational expectations and plans to join the armed forces have the greatest impact on the black gender gap in community college enrollment among all the predictors considered. In addition, both indicators are associated with black students' chances of college entry in four-year institutions. Similar to blacks, the future outlook hypothesis also explains a considerable proportion of the white gender gaps in two- and four-year enrollment.

Overall, the results support more strongly the academic and future outlook hypotheses. The black gender gap in four-year college enrollment is affected more strongly by academic preparation and in two-year college entry by future outlooks. On the other hand, the white gender gap is affected by both hypotheses at both levels of college enrollment. In addition, the white gender gap at four-year institutions is modestly sensitive to parent and school support and academic disengagement. Although not directly associated with the black gender gap, parental school involvement predicts black enrollment in four-year institutions.

CHAPTER 5

DOES THE IMPORTANCE OF COLLEGE PREDISPOSITION FACTORS VARY BY RACE *AND* GENDER?

The analysis in Chapter 4 explored whether aspects of college predisposition make a difference in the gender gap in college enrollment. The results demonstrate that academic preparation reduces substantially the gender disparity in college entry at four-year institutions for black and white high school graduates. Student college expectations and plans to join the military also reduce the gap in males' and females' chances of college entry at the community college level for blacks and at the four-year college level for whites. To a lesser extent, the white gender gap also diminishes when students receive high levels of parent and school support and exhibit low academic disengagement. Furthermore, descriptive statistics shown in Table 4.1 reveal that males and females differ in important ways. Males and females accrue different levels of academic preparation, college expectations, and military plans. Taken together, the analyses in Chapter 4 show that males and females across racial groups accrue different levels of resources towards college predisposition and that certain factors of college predisposition reduce the black and white gender gaps. Thus, I examine in this chapter whether factors of college predisposition are associated with college enrollment differently for black males, black females, white males, and white females.

Specifically, this chapter explores the following research questions: Are the black and white gender gaps in college enrollment a result of differences in the levels of resources that males and females accrue by the time they complete high school or are the gender gaps a result of a differential payoff that resources have on males' and females' postsecondary enrollment? For example, are black males not going to college because they are less academically prepared than black females? Or are black males not going to college because academic preparation yields a greater benefit to black females than black males? If the former, it would suggest that young black men earn lower grades and test scores than young black women, and because of this "black-black" achievement gap young black women are predisposed towards postsecondary education, and in contrast, young black men are oriented towards employment or other non-educational endeavors. If the latter, it would suggest that certain aspects of college predisposition are more important for males than females, and thus that males and females have differential paths towards higher education.

College Predisposition and Postsecondary Enrollment by Race and Gender

Tables 5.1 and 5.2 show the final model predicting two- and four-year postsecondary enrollment presented in Table 4.12, but separately for each of the four race by gender groups. The analyses shown in Tables 5.1 and 5.2 reveal whether the same factors of college predisposition are related to males' and females' postsecondary enrollment. The two models in Table 5.1 show coefficients predicting postsecondary enrollment with background, academic preparation, parent and school support, academic disengagement, and future outlooks, separately for black males and black females. Table 5.2 displays the same models but for white males and white females.

Black Gender Differences in the Effect of College Predisposition on Postsecondary Enrollment

Table 5.1 reveals three significant differences²⁷ in the relative magnitude of the coefficients for predicting black males' and black females' community college enrollment. The three factors are socioeconomic status, student college expectations, and plans to join the armed forces. Socioeconomic status is associated positively with two-year college enrollment for black males and negatively for black females. The negative association between being a black female and college attendance at a two-year institution is puzzling. The expectation is that college attendance at any institutional type would be positively associated with SES. College expectations are positively related with two-year college enrollment for black females and are unrelated for black males'. Plans to join the armed forces are associated negatively with two-year college enrollment for black females only. These findings confirm the patterns observed in the pooled model for all black students presented in Tables 4.11 and 4.12 which show that future outlooks predict community college enrollment and mediate substantially the black gender gap. Table 5.1 elucidates these patterns and shows that black males and females need different predisposing resources to orient them towards a college education. Comparing black students who enrolled in a community college to those who did not enroll in any postsecondary educational institution immediately after high school reveals that black males are more sensitive to financial resources and black females to having expectations and concrete plans for the future. Furthermore, the locus of predisposition for community college enrollment appears to be structural for black males and motivational for black females. Black males from poor families may have less financial support to

²⁷I conducted t-tests to assess whether the gender differences of the coefficients predicting postsecondary enrollment are statistically significant. Appendix H displays the t-test formula and t-test values for each pair of male and female coefficients in Tables 5.1 and 5.2.

pursue a community college education and therefore may feel pressure to delay their college education and enter the labor force. On the other hand, black females' likelihood of enrolling in a community college immediately after high school completion versus not attending any postsecondary educational institution depends on whether they have expectations and career plans that require a college education.

Focusing on the models that predict four-year college enrollment reveals several differences in the relative magnitude of coefficients for black males and black females. Among student background characteristics, the odds of an immigrant black male enrolling in a four-year college are over four times higher than the odds of an U.S.-born black male, and the positive effect is related to black males' four-year college attendance only. Number of siblings is negatively related to black females' chances of four-year college enrollment and is unrelated to black males'. Also, there is a negative association between attending a public high school type and enrollment in a four-year college for both black males and females, however the negative association is modestly stronger for black females.

An important finding from Chapter 4 is that indicators of academic preparation explain the gender disparity among black students' enrollment in four-year institutions. We do not know, however, whether the effects of academic preparation on college enrollment are associated differently for black males and females. Table 5.1 shows that the gender differences in coefficients of academic preparation are not uniform. Being held back reduces the odds of a black male enrolling in a four-year college by 59% but does not predict black females' enrollment, thus indicating that the negative effect of repeating a grade is more detrimental on black males' four-year college enrollment than on black females'. High school grades are associated positively with enrollment in a four-year college for both black males and black females, although the positive association is stronger for black females. Standardized composite reading and

mathematics test scores are associated positively for black females' four-year college enrollment and unrelated to black males. Taken together, these findings indicate that academic preparation measures which tap into a student's sense of how well they are doing in school and how much academic effort they are exerting compared to other students matter for both black males and females. However, black males and females differ in how these measures affect their college enrollment in four-year institutions. Black males are more sensitive to being held back, and black females receive a greater payoff for getting good grades.

The next four blocks of variables--parental and school support, academic disengagement, and future outlooks--reveal four significant differences in how college predisposition factors affect the on-time college enrollment of black males and females. Parent school involvement is the only adult support indicator that predicts four-year college enrollment. Parents' volunteering or attendance at school events or activities is associated positively with black males' four-year college enrollment only. The effect of parent school involvement is very strong for black males. Students who have parents who volunteer or participate in school activities have more than double the odds of enrolling in a four-year college.

Among the indicators of academic disengagement, the negative effect of school misbehavior is strong for black females only. This is a very important finding because it contradicts claims that a wide-spread oppositional culture drives the poor academic outcomes of black males. College enrollment of black males may not be affected by academic disengagement perhaps because the less disruptive black males are the ones who persist through high school. In fact, the race by gender distribution on academic disengagement measures (see Table 4.1) shows that black males are not more likely than

any other race by gender group to misbehave in school and have friends who do not value education or drop out of school.

The final set of indicators show that college expectations and plans to join the military affect the four-year college enrollment of black males and females differently. Student college expectations are associated positively with black females' college enrollment and are not associated with black males'. Plans to join the armed forces are associated negatively with both black males' and females' four-year college enrollment, however, the association is slightly stronger for black males.

Table 5.1. Odds of Black Students Enrolling in a Two- or Four-Year College Versus Not Pursing a Postsecondary Education

| Variables | Males | | Females | |
|--|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| <i>Background characteristics</i> | | | | |
| Immigrant | 2.97 | 4.27* | .54 | .51 |
| Two parent household | 1.29 | 1.09 | 1.46 | .71 |
| Number of siblings | .88 | .95 | .89 | .86* |
| Socioeconomic Status | 1.78* | 1.48 | .60* | 1.17 |
| Public school | .96 | .19** | .37 | .09*** |
| School percent minority | .99 | .92 | .95 | 1.14 |
| School percent of students on free lunch | .93 | 1.04 | 1.01 | .86 |
| Urban | 1.41 | 1.57 | 1.23 | 1.17 |
| <i>Academic preparation</i> | | | | |
| Repeated a grade | .94 | .41** | 1.16 | .94 |
| High school grades | .99 | 1.32** | 1.04 | 1.51*** |
| Standardized reading and mathematics test scores | .99 | 1.01 | 1.01 | 1.06* |
| <i>Parent and school support</i> | | | | |
| Parent college expectations | 1.01 | 1.26 | .98 | 1.04 |
| Parent academic discussions | 1.35 | 1.05 | 1.12 | 1.13 |
| Parent school involvement | 1.49 | 2.33** | .99 | 1.62 |
| Parent social supervision | .89 | .98 | .96 | 1.10 |
| Teacher expectations | 1.15 | 1.11 | 1.37 | .66 |

Table 5.1. (continued)

| Variables | Males | | Females | |
|--------------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| <i>Academic disengagement</i> | | | | |
| Peer academic perception‡ | .88 | .88 | 1.15 | .90 |
| Number of dropouts among peers | .97 | 1.03 | .84 | .56 |
| School misbehavior | .71 | .82 | 1.53 | .42* |
| <i>Future outlooks</i> | | | | |
| Student college expectation | 1.12 | 1.15 | 1.30** | 1.40*** |
| Plans to join armed forces | .52 | .34*** | .41** | .40** |
| Chi-square | 240.02*** | | 224.46*** | |
| Pseudo R ² | .18 | | .27 | |
| N | 523 | | 614 | |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. Unweighted N is reported in the last row. ‡=Peer academic perception is coded so that high values indicate positive academic outlook. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Comparison of Black and White Gender Differences in the Effect of College Predisposition on Postsecondary Enrollment

Similar analysis was conducted on the white student sample to investigate whether the patterns observed among black high school graduates are unique to black students. Overall, Tables 5.1 and 5.2 demonstrate that gender patterns among black students are not remarkably different from that of white students, particularly at the four-year college level. There are two gender patterns that are similar among blacks and whites in predicting community college enrollment. One similarity is the strong, positive association of socioeconomic status on community college enrollment for black males and white males. The second pattern indicates that plans to join the armed forces are negatively related to black females and white females only. The analysis reveals one distinct difference in the gender patterns of black and white students' chances of college entry. Student college expectations are positively related to black females' community college enrollment only. In contrast, the positive effect of college expectations is more strongly related to white males', although the white gender difference in the magnitude of the coefficient is very small.

Consistent with the findings in Chapter 4, there are more significant gender differences in predicting community college enrollment among whites than among blacks because the sample of white students is much larger than that of blacks, thus making it easier to find significant coefficients in the white models. Among indicators of student background characteristics, living in a two-parent household is associated positively with the community college enrollment of white females only. However, having many siblings and attending a poverty-stricken high school are more negatively related to white females' enrollment. In terms of academic preparation, Table 5.2 shows that grades and test scores matter more for white females than white males, although the gender

difference is quite small. Lastly, the negative effect of school misbehavior on community college enrollment is associated with white males only.

The models predicting four-year college enrollment reveal that there is a great deal of similarity in how aspects of college predisposition are associated with the four race by gender groups. In total, there are eight gender patterns that are consistent among black and white high school graduates. Focusing on student characteristics shows that (1) the negative effect of having many siblings is associated with black females and white females only and (2) attending a public school is more negatively related with black females' and white females' four-year college attendance, although the relative magnitude of the coefficients is small. Among the academic preparation indicators (3) being held back is negatively associated with black males' and white males' chances of four-year college attendance only, (4) the positive effect of high school grades is stronger for black females and white females, and (5) the positive effect of test scores is related to black females only and associated more strongly with white females. Only one form of parent and school support indicates a consistent gender difference across racial groups in its relationship to enrollment in four-year college. (6) Parents' school involvement is positively related for black males only and strongly related for white males. It is important to note that the effect of parent school support is stronger on black males' four-year college enrollment than on white males'. (7) Two measures of academic disengagement are negatively related to black females' and white females' four-year college enrollment. However, black females' enrollment is negatively affected by disciplinary problems while white females' enrollment is associated negatively by having friends who dropped out of school. Lastly, only one aspect of future outlooks indicates a gender difference in its association with four-year college enrollment. (8) Student college expectations are related only to black females' chances of enrollment in four-year

institutions and are associated more strongly, albeit modestly, to white females' chances of four-year college enrollment.

There are a few gender patterns in the models predicting enrollment in four-year institutions that are specific to a student's racial group membership. For example, being an immigrant has a strong, positive effect on black males' chances of four-year college enrollment only. The effect of two-parent household is positively associated with white females' four-year college enrollment, and attending a poverty-stricken high school is negatively related to white females. Both factors are not associated with black students' or white males' chances of college entry into four-year institutions. Socioeconomic status is associated more strongly with white males' four-year college attendance. It is important to note, however, that the magnitude and direction of black males' and females' SES coefficients suggests that with a larger sample size we may find SES effects on black students that are similar to those of whites. Another aspect of adult support that indicates a gender difference is teacher expectations as measured by a teacher's or counselor's expectations for his or her student's future. This gender difference favors white males' chances of enrollment in four-year institutions only. Finally, plans to join the armed forces are associated negatively with four-year college enrollment depending on the race and sex of the student. Specifically, having military plans is associated more negatively with black males' as well as white females' chances of college enrollment in four-year institutions.

Table 5.2. Odds of White Students Enrolling in a Two- or Four-Year College Versus Not Pursuing a Postsecondary Education

| Variables | Males | | Females | |
|--|-------------------------|-------------------------|-----------------------------|------------------------------|
| | 2-yr vs. never enrolled | 4-yr vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| <i>Background characteristics</i> | | | | |
| Immigrant | 1.96 | 1.00 | 1.16 | 2.01 |
| Two parent household | 1.03 | 1.23 | 1.38** | 1.54*** |
| Number of siblings | .93 | .90 | .91** | .89** |
| Socioeconomic Status | 2.04*** | 3.01*** | 1.45*** | 2.75*** |
| Public school | .67 | .54* | .96 | .51* |
| School percent minority | 1.06 | .94 | 1.08 | .94 |
| School percent of students on free lunch | .93* | .98 | .85*** | .90* |
| Urban | .87 | 1.09 | 1.04 | 1.29 |
| <i>Academic preparation</i> | | | | |
| Repeated a grade | .92 | .60* | .97 | .69 |
| High school grades | 1.19*** | 1.51*** | 1.21*** | 1.55*** |
| Standardized reading and mathematics test scores | 1.00 | 1.06*** | 1.03** | 1.08*** |
| <i>Parent and school support</i> | | | | |
| Parent college expectations | .98 | 1.07 | 1.07 | 1.08 |
| Parent academic discussions | 1.16 | 1.07 | .83 | 1.09 |
| Parent school involvement | 1.11 | 1.73*** | 1.11 | 1.50** |
| Parent social supervision | .97 | .94 | 1.15 | 1.07 |
| Teacher expectations | 1.25 | 1.78*** | .98 | 1.18 |

Table 5.2 (continued)

| Variables | Males | | Females | |
|--------------------------------|-------------------------------|-------------------------------|--------------------------------------|------------------------------------|
| | 2-yr vs. never enrolled | 4-yr vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| <i>Academic disengagement</i> | | | | |
| Peer academic perception † | 1.21 | 1.35 | 1.27 | 1.28 |
| Number of dropouts among peers | 1.03 | .77 | .89 | .57*** |
| School misbehavior | .78* | .83 | 1.24 | 1.22 |
| <i>Future outlooks</i> | | | | |
| Student college expectations | 1.24*** | 1.53*** | 1.21*** | 1.56*** |
| Plans to join armed forces | .93 | .66* | .66** | .58** |
| Chi-square | 992.04*** | | 1,112.32*** | |
| Pseudo R ² | .30 | | .30 | |
| N | 3,849 | | 4,058 | |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. Unweighted N is reported in the last row. †=Peer academic perception is coded so that high values indicate positive academic outlook*=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Illustrative Cases

To interpret the substantive significance of the models in Tables 5.1 and 5.2, I present four illustrative cases²⁸ shown in Table 5.3 that model the effects of different levels of college predisposition factors on a student's predicted probability of postsecondary enrollment. Each illustrative scenario showcases a profile of an individual who is a black male, black female, white male, or white female and who is U.S.-born, lives with both biological parents, and attends an urban public high school. Other student characteristics as well as non-significant gender differences are held constant at their subsample means.

The scenarios under consideration are as follows. Case A profiles an individual who has accrued strong family, school, and academic resources and has positive disposition towards education, college expectations, and career plans that encourage college enrollment immediately after high school. This individual has not repeated a grade, is at the 75th percentile of high school grades, test scores, parental school involvement, and teacher expectations. In addition, a student who fits this profile has few friends who dropped out of school and is not likely to have serious behavioral problems.

Case B is the opposite of Case A. Case B profiles a student who has weak academic preparation and support from his/her family and school. This student has weak institutional ties measured by his/her school disciplinary problems and number of friends who dropped out of school. Such a student does not expect to earn a baccalaureate degree but has plans to join the military soon after high school. Case C combines elements of Cases A and B. Case C profiles a student who has strong academic

²⁸These cases are adopted from Plank and Jordan's (2001) analysis of NELS:88 10th grade cohort. In their analysis, Plank and Jordan assess the influence of school and family support on an individual's predicted probability of postsecondary enrollment by 1994.

preparation but does not have strong social support from his or her parents or school staff. Under this scenario academic disengagement and future outlooks are held constant at their sample means because given a strong academic background but weak adult support system it is not clear whether a student's academic engagement and outlooks would be weak or strong. Case D models the reverse of Case C. The student who represents Case D is poorly prepared academically but has received substantial support from his or her family and teacher/counselor. As in Case C, indicators of academic disengagement and future outlooks are held constant at their sample means.

The predicted probabilities²⁹ presented in Figures 5.1 through 5.4 are based on the case profiles described in Table 5.3 and the parameter estimates of Tables 5.1 and 5.2. Subsample samples are used in calculation and therefore predict average individuals in their categories. The predicted probabilities among females and males may not equal 100% due to rounding. Figures 5.1 through 5.4 are organized by case type in alphabetical order. In each figure I present first the predicted probabilities of black males and females and then of white males and females. Figure 5.1 represents the most desirable profile in which black and white students earn high grades and test scores, receive strong support from key adults, are academically engaged, and have outlooks oriented towards college enrollment. Under this ideal setting, Figure 5.1 shows that the black gender gap would be reduced to 5%, favoring black females. A black student has a 21% and 26% chance of enrolling in a two-year college depending on whether the student is a male or female, respectively. His or her predicted probability of enrolling in a four-year college versus never enrolling in any postsecondary educational institution is 66%.

²⁹ The predicted probabilities are calculated by first running in STATA the MNL regression models and then the PVALUE command to indicate the value to be used for each predictor variable.

In contrast, a white male or female with strong academic preparation, adult social support, and college expectations as well as minimum levels of academic disengagement has virtually the same chance of enrolling in a two- or four-year college. Case A student has less than a 20% chance of enrolling in a two-year college and over 80% chance of attending a four-year college. Such a student has less than a 5% chance of never attending a postsecondary educational institution immediately after high school. The racial differences in the predicted probabilities of college enrollment reflect the weaker academic preparation and more disadvantaged backgrounds of black students in the sample. Separately or together these factors may reduce the rate at which blacks are able to convert their economic, social, and academic capital for postsecondary enrollment, particularly in four-year institutions.

Case B is the opposite of Case A. Case B depicts an individual who falls in the bottom 25th percentile in academic achievement and measures of social support, academic disengagement, and future outlooks. Under this scenario, a black male is less likely to enroll in college (72%), followed by a white male (61%), black female (66%), and white female (55%), among students in their respective race by gender group. Case B's chances of college entry are higher at the two-year level. The predicted probability for a black male is 25%, black female 30%, white male 35%, and white female 41% among their specific race by gender group. Across the four race by gender groups, a student in weak academic standing and with weak social support has the lowest predicted probability of furthering his or her postsecondary education immediately after high school completion.

Case C illustrates the predicted probabilities of a black or white high school graduate with strong academic preparation but limited social support and average ties to school. Figure 5.3 shows that the lack of parent or teacher support is more negatively related to a young black male's chance of college enrollment. A black male's predicted

probability of never enrolling in a postsecondary educational institution is twice that of a black female's (35% of black males versus 18% of black females). A similar gender gap also exists among white students, although overall white students are more likely to go to college. A white male's predicted probability of no postsecondary enrollment is 16%, and a white female's is 7%. Despite lacking adult support, a student with profile C is more likely to enroll in college and disproportionately attend a four-year institution.

Case D profiles a student who did not perform well in school but has received substantial support from his or her parents and teacher/counselor. This individual also has average ties to his or her high school and expectations to enroll in college education. The difference in the predicted probabilities between Cases C and D indicates that academic preparation, which is a strong resource in profile C but a weak asset in profile D, is a very important factor for promoting a student's access to postsecondary education. A student with profile C has a higher probability of college entry and attending a four-year college. In contrast, Case D, with weak academic preparation but strong adult support, is less likely to enroll in college; however if such a student attends college he or she is more likely to enroll in a two-year institution. Specifically, a black male's chance of no college entry increases from profiles C and D by 6% (35% and 41% of black males, respectively). A black female's chance of no college entry increases by 11% (18% and 29% of black females, respectively) while a white male's predicted probability of no enrollment more than doubles from 16% to 38% of white males and more than quadruples for white females from 7% to 32% of white females, respectively. It is important to note that the decline in college entry between profiles C and D is less dramatic for black males. This pattern suggests that both academic preparation and adult support are strongly interconnected in their influence on black males' and, to a lesser extent, black females' access to higher education. Hence for blacks students, profiles C and D demonstrate that there is a considerable loss of talent in access to a postsecondary

education when black students' lack academic or supportive resources during their high school careers. The implication is that the positive effect of academic preparation is weakened without positive adult encouragement and vice versa.

Table 5.3. Profile of Four Illustrative Cases

| Predictors | Profiles | | | |
|----------------------------------|--|--|--|--|
| | Case A Strong College Predisposition | Case B Weak College Predisposition | Case C Strong Academics Weak Support | Case D Weak Academics Strong support |
| <i>Academic preparation</i> | | | | |
| Held back | No | Yes | No | Yes |
| Grades | 75 th percentile | 25 th percentile | 75 th percentile | 25 th percentile |
| Test scores | 75 th percentile | 25 th percentile | 75 th percentile | 25 th percentile |
| <i>Parent and school support</i> | | | | |
| Parent college expectations | Sample mean | Sample mean | Sample mean | Sample mean |
| Parent academic discussions | Sample mean | Sample mean | Sample mean | Sample mean |
| Parental school involvement | 75 th percentile | 25 th percentile | 75 th percentile | 25 th percentile |
| Parental supervision | Sample mean | Sample mean | Sample mean | Sample mean |
| Teacher expectations | College education | Less than college | College education | College education |
| <i>Academic disengagement</i> | | | | |
| Peer academic perception | Sample mean | Sample mean | Sample mean | Sample mean |
| Number of dropouts among peers | None | One or more | None | One of more |
| School misbehavior | 25 th percentile | 75 th percentile | 75 th percentile | 25 th percentile |
| <i>Future outlooks</i> | | | | |
| Student college expectation | College | Less than college | Sample mean | Sample mean |
| Plans to join armed forces | No | Yes | Sample mean | Sample mean |

Figure 5.1. Case A: Effects of Strong College Predisposition on the Predicted Probability of College Entry, by Race and Gender

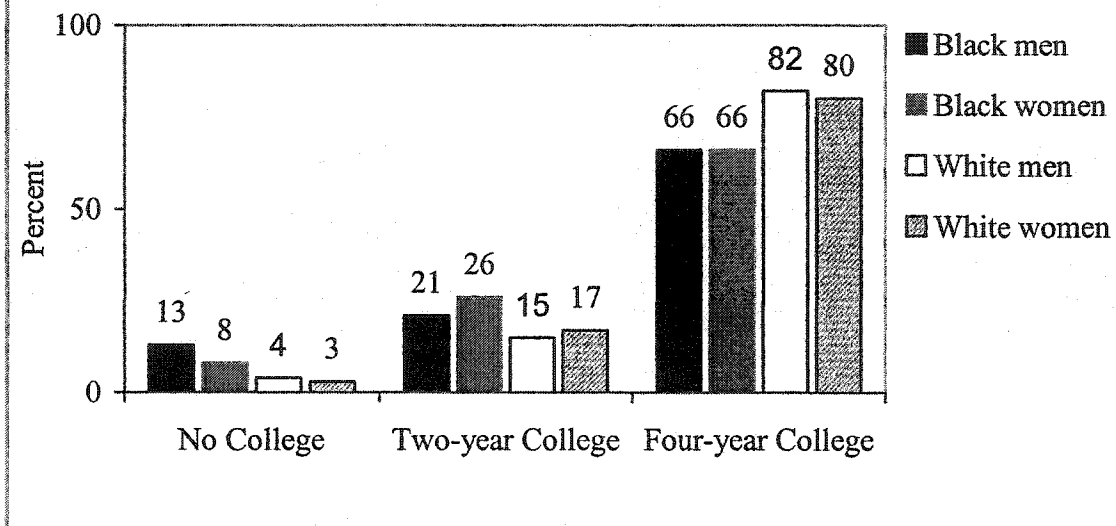


Figure 5.2. Case B: Effects of Weak College Predisposition on the Predicted Probability of College Entry, by Race and Gender

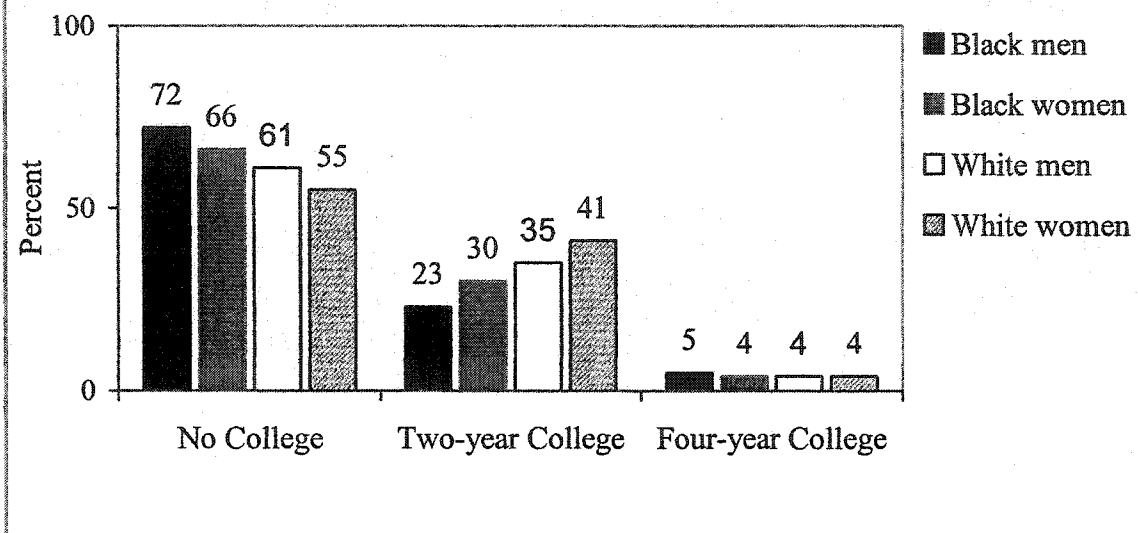
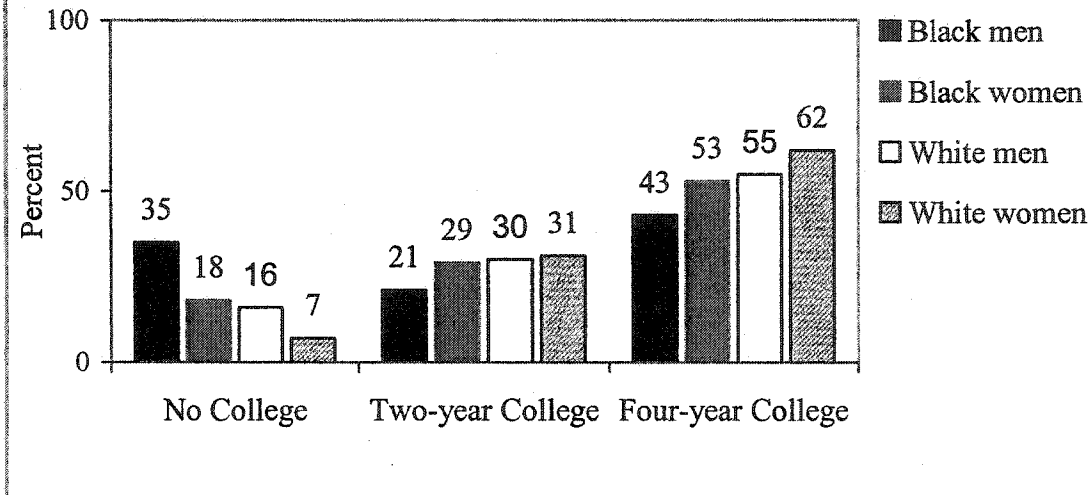
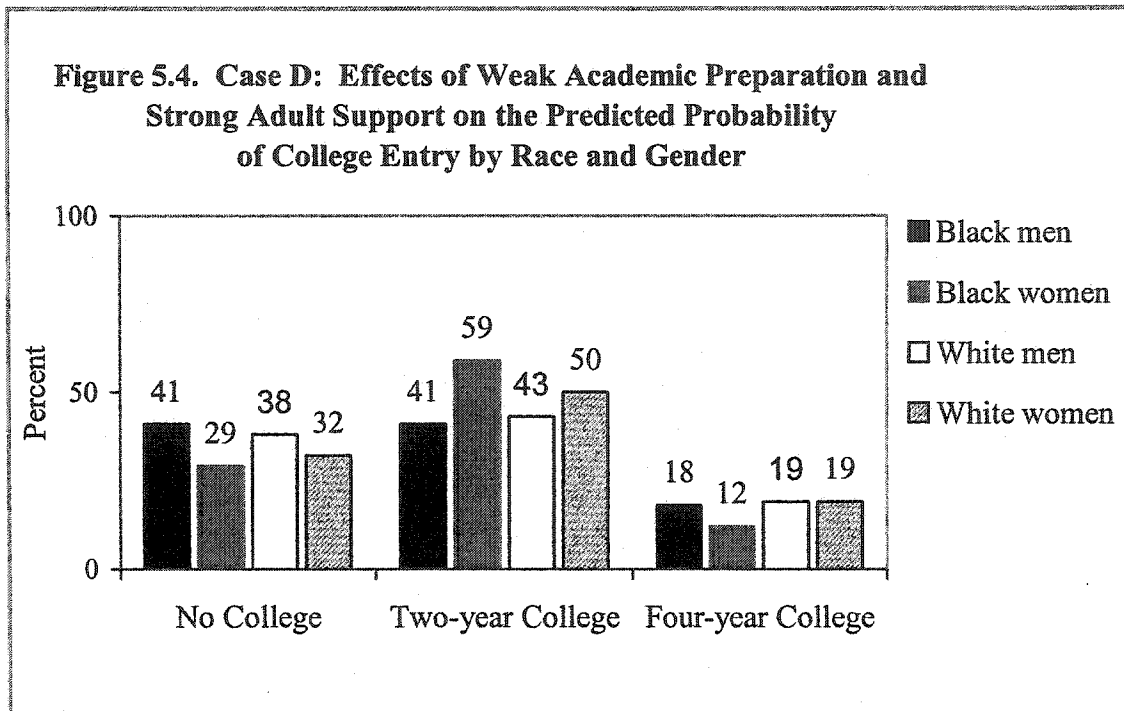


Figure 5.3. Case C: Effects of Strong Academic Preparation and Weak Adult Support on the Predicted Probability of College Entry by Race and Gender





Discussion

Tables 5.1 and 5.2 reveal two patterns in the postsecondary trajectories of high school graduates that differ by college type, race, and gender. Differences by college type show that at the two-year college level black students' chances of college entry are associated with socioeconomic status, college expectations, and plans to join the military. Many more aspects of college predisposition are related to black students' chances of postsecondary enrollment in four-year institutions. They include student characteristics such as being an immigrant, having many siblings, and attending a public high school, all three measures of academic preparation, parental school involvement, school misbehavior, and both measures of future outlooks.

Among white students, there is more overlap in the predisposition indicators that affect two- and four-year college enrollment. Significant predictors of two- and four-year postsecondary enrollment include living in a two-parent household, number of siblings, socioeconomic status, attending a poverty-stricken high school, high school grades, test scores, student college expectations, and plans to join the army. However, the postsecondary trajectories of white students differ in that the effects of predisposition factors are more strongly related with enrollment in four-year institutions.

Effects that are not consistent across college type include the association of school misbehavior with two-year college entry and the effects of attending a public school, being held back, parental school involvement, and teacher expectations on four-year college enrollment. While there are some racial differences, both black and white high school graduates are affected by similar predictors of enrollment, particularly in four-year colleges.

The second pattern reveals that regardless of their racial group membership, males and females experience differential paths towards higher education. That is, black

males and white males follow similar postsecondary trajectories, and black females and white females are affected by virtually the same indicators of college predisposition. Among males, their paths are influenced more strongly by positive institutional resources and adult interactions that are connected with school-related outcomes. For example, the multivariate analyses show that socioeconomic status, being held back, and parental school involvement—measures that encompass family material resources and student-adult interactions—are associated more strongly with males' college entry. In addition, there are three factors that are related to the college enrollment of either black males or white males. Being an immigrant is associated with black males' college enrollment only, and teacher expectations and misbehavior are associated with white males' only. But even these three distinctions fall within the overall pattern that institutional resources and adult support are important for promoting males' postsecondary attendance.

The male postsecondary trajectories show that socioeconomic status is associated more strongly with males' chances of college entry across racial groups. Specifically, the positive effect of socioeconomic status is associated more strongly with predicting enrollment in two-year colleges for black males and white males. In addition, socioeconomic status is associated more positively with white males' enrollment in four-year institutions. These findings suggest that status attainment theory predicts, in part, the college enrollment of not only white males but also black males. This means that parents' positional advantages, in terms of income, occupational prestige, and education matter more for improving both black and white males' chances of college enrollment. Presumably, a student of high socioeconomic status is more likely to excel academically and develop college expectations because he is likely to live in an affluent neighborhood, and thus attend a resource-rich school that offers greater learning opportunities and more frequent student-teacher contacts. Despite these advantages, black males convert their parents' socioeconomic status for college attendance at a lower rate than white males.

This racial difference may be due to the fact that black middle-class families often live in racially segregated communities that border poorer neighborhoods and consequently accrue fewer of the advantages afforded to white middle-class families (Patillo-McCoy 2000) such as better schools and more exposure to professional adults.

Measures that represent aspects of student-adult interactions include being an immigrant, parental school involvement, teacher expectations, and repeating a grade. The first three indicators are positively related to males' chances of college entry. Being an immigrant is associated with the four-year enrollment of black males only. This association may capture the additional resources that immigrant students receive in school to improve their chances of educational success in American society (Stanton-Salazar and Dornbusch 1995). Immigrant students (who may be from the Caribbean or an African country) may receive specialized services to improve their literacy skills in English and through these services may experience greater academic guidance and positive student-teacher contacts. This explanation is consistent with the other findings that show that positive adult feedback and parental involvement in school-related activities are associated more strongly with males' educational outcomes (Muller 1998). Tables 5.1 and 5.2 reveal additional findings that support this claim. For example, high expectations from a teacher or counselor are associated with enrollment in four-year colleges for white males only. In addition, parents' volunteering or attendance at school events or activities is strongly related to the four-year college enrollment of both black males and white males. It is important to note that parental school involvement as well as immigrant status are the only predisposition indicators that benefit black students' chances of college entry at a higher rate than white students. Thus, activities that involve positive student-adult contacts are important for males', especially for black males', access to higher education.

An alternative explanation is that immigrant students have a more positive educational outlook or academic ethos and that this educational disposition influences their academic progress and consequently their college attendance. Evidence of a negative academic disposition is often present in the lack of importance that peers place on doing well in school, completing high school, and pursuing a postsecondary education as well as the number of friends who are not in school and disciplinary problems (Ainsworth-Darnell and Downey 1998; Cook and Ludwig 1997). Table 5.1 shows that these aspects of academic disengagement which are measured separately from immigrant status are not associated with the college entry of black males. Thus, this finding indicates that the positive effect of being an immigrant points to aspects of a student's life that are not necessarily linked to an oppositional outlook towards education.

The importance of adult evaluation is also supported by the negative association between being held back and the four-year college enrollment of black males and white males only. Although repeating a grade is often considered a measure of a student's academic progress, research has shown that over and above academic achievement, factors such as a student's race, sex, attendance, and parents' level of school involvement are associated positively with grade retention (Jimerson and Kaufman 2003). This suggests that teachers evaluate more harshly the attitudes and behaviors of male students perhaps because they comply less with rules that sanction physical activity and aggressiveness, behaviors which are displayed disproportionately by male students. In addition, differences between the norms, behaviors, and practices of minority students and the middle-class culture promoted by schools often produce cultural clashes that affect negatively how teachers perceive the academic potential of minority students and black males (Ferguson 2001a). The implication is that in addition to academic progress "being held back" represents multiple non-academic factors that affect how a teacher interacts and consequently assesses a student's academic potential. Thus, being held

back is more problematic for males and black males in particular because male students may interpret this form of teacher evaluation as a negative indictment of not only their academic capabilities but also how males are perceived by society at large.

Among females, indicators that represent weak family resources are associated more negatively with their chances of college entry. The negative association of having many siblings is related to white females' chances of college entry at two- and four-year institutions and to black females' predicted probability of college entry at four-year institutions. This finding suggests that having many siblings limits the resources parents have available, and thus daughters either receive less parental support or are less able to convert limited parental assets for postsecondary enrollment.

One aspect of family structure that has a positive association with females' chances of college entry is living in a two-parent household. This relationship is positively related to two- and four-year college enrollment for white females only. Living in a two-parent household suggests that young white women receive a greater payoff for postsecondary enrollment because fathers' additional material and emotional contributions offer both mothers and fathers more time to spend with their children. More parental time may translate into greater verbal interactions between daughters and their parents. Research shows that parent-daughter verbal relationships are associated more positively with adolescent girls' mathematics test scores and gains in math achievement (Muller 1998). Thus, two-parent families may be equally important for encouraging the postsecondary educational participation of young women.

In terms of school effects, the findings suggest that females are less likely to go to college if they attend poor or low-SES schools. It is difficult to determine if the negative association between school type and college entry is a result of selection bias or differences in the organizational features of public and private schools. For example,

because girls tend to do well in school and show promise of success in their future endeavors, parents may choose to invest their limited financial resources by sending their daughters to a private high school. Parents may also be more protective of their daughters and feel that a private high school can provide a safer, disciplined environment that guards against violence and teen pregnancy. In contrast, because boys tend to experience more academic and behavioral problems, parents may be less willing to spend their money on private education for their sons. Thus, family distribution of resources may select out of the public high schools a disproportionate percentage of academically gifted students leaving the public high schools with a higher concentration of students, especially girls, with weaker academic skills and parental support. Therefore, the negative public high school effect may reflect parental selection bias, and not necessarily, differences in the opportunity structure of public and private high schools.

Measures of academic preparation, school behavior, and motivation are crucial predisposition resources for promoting or hindering black females' and white females' postsecondary educational careers. Earning high grades and doing well on standardized tests have a greater payoff for black females and white females. This female pattern is consistent for white females' predicted probabilities of postsecondary enrollment in the two- and four-year colleges and for black females' chances of entry in four-year institutions. The importance of grades and test scores suggests that these measures provide women with greater confidence in their ability to succeed in college and motivation to pursue a college education. This finding also indicates that girls convert academic assets to higher levels of college entry because economic opportunities without a college education may appear more limited for women than for men. Strong academic background coupled with college expectations is more important for young women; both factors offer young women the opportunity to achieve multiple goals as wives, mothers, and career women (Mickelson 2003).

In terms of academic disengagement, having friends who dropped out of school is negatively related with the four-year enrollment of white females only and school misbehavior is associated with four-year enrollment of black females only. These negative effects are much stronger than the association of school misbehavior on the two-year college enrollment of white males. These patterns suggest that academic disengagement is more detrimental for young women's postsecondary trajectories. Girls' school misbehavior may indicate a more serious level of disengagement. Perhaps males who persist through high school are less likely to be severely affected by negative peers and behavioral problems because the more disengaged males withdraw from school early.

Finally, the effect of military plans is not consistent across race, gender, or college type. Plans to join the military are more negatively related with white females' enrollment in two- and four-year colleges. Among blacks, however, military plans are more negatively related to black females' two-year college enrollment. At the four-year college level, it is associated more negatively with black males' chances of enrollment. These patterns raise questions about whether military participation offers the same benefits and opportunities to men and women across race/ethnic groups.

The illustrative cases elucidate the patterns revealed in the multivariate analyses as well as show how varying levels of resources affect the postsecondary trajectories of the four race by gender groups. The profiles reveal that academic preparation is a powerful predictor of postsecondary enrollment, particularly at the four-year level. However, resources in the form of adult support are crucial for increasing access in higher education. In addition, the effects of strong academic preparation and adult support on college entry are powerful for all students, but they are somewhat more powerful for black males. An important aspect to note is that even with strong academic preparation, adult support, and academic engagement as well as a college outlook, black

high school graduates convert these assets for postsecondary enrollment at lower rates than whites. This may be the case because white adolescents are more likely to live and learn in environments that provide greater opportunities for accruing the assets that predispose students towards postsecondary education.

CHAPTER 6

THE POSTSECONDARY TRAJECTORY OF “DELAYED ENROLLEES”

In the previous chapters, I explored the gender disparity in postsecondary enrollment among black and white high school graduates soon after high school completion. I examined the effects that predisposition factors have on the likelihood that these students would enroll in college within the first two years after high school completion. This chapter explores the postsecondary trajectory of those students who did not enroll in any college within the first two years after high school. It investigates how the resources they accrued during high school and their experiences the first two years after high school affect their chances of entry into college time later in their adult lives. Understanding who delays enrollment and why some adults enter college after failing to persist in the traditional college-track, that is, continuous college enrollment immediately after high school completion, provides insight into the mechanisms that lead women into, but channel men away from postsecondary education.

Of the four hypotheses examined in the previous chapters, the econometric framework is more applicable for understanding the factors that influence the college entry of older adults because it conceptualizes college attendance as a calculative choice based on an evaluation of competing options and influences. High school graduates are in a better position to exercise “choice” because they enjoy greater independence and have gained additional experiences during their non-college enrollment period. Research has shown that although students make calculative decisions about their postsecondary

destination, their choices are shaped by the opportunities and obstacles they experience due to their race and gender (Beattie 2002). Thus, I expect that the college entry of nontraditional adults would differ by experiences that reduce barriers most often face by their social position in terms of race and gender. I expect that early high school experiences will play a lesser role in their decision of whether to enroll in college because their years after high school may offer race and/or gender experiences that shape their future outlook on the adult opportunity structure. Since financial support is also an important factor in determining who goes to college (Plank and Jordan 2001), family resources may continue to play an important role in older adults' postsecondary destination.

There is scarce research on the enrollment patterns of adults who do not persist in a traditional college track (Astone *et al.* 2000). The research available generally focuses on college persistence and attrition (Adelman 1999; Tinto 1987). Through this body of work, Astone and associates (2000) have formulated three sets of hypotheses on how early high school experiences and postsecondary trajectories may affect an adult's probability of college enrollment. The hypotheses argue that college entry depends on an adult's cost of going to college, probability of college success, and value of a college on education. Their analysis focused on a population of African American adults surveyed in the 1990s when they were between 27 and 33 years of age. These participants are children of an earlier cohort who had participated in a study of prenatal care from 1960 through 1964 at John Hopkins University Hospital. Many of the adults in the 1990 sample experienced one or two spells of college enrollment.

In their first hypothesis, Astone and associates postulate that the cost of enrolling in college in terms of time, money, and lack of support may be reduced or increased depending on an individual's family financial resources, time available to devote to postsecondary education, family and spousal support, employment status, and exposure

to educational opportunities. Astone *et al.* posit that poor family resources in the form of family poverty, large sibling size, non-two parent household, and dependent children will reduce an adult's chance of enrolling in college even several years after high school completion (Astone *et al.* 2000:136-37). They also hypothesize that adults who are married may have greater resources to pursue a college education, while adults who are employed may not have the time to pursue a college education.

I add to Astone's hypotheses by positing that being an immigrant would also increase the likelihood that an adult would enroll in college because immigrants' schooling socialization and culture may stress greater academic discipline and stronger disposition towards education (Alfred 2003). This cultural strength may enhance a student's commitment and desire to pursue a college education.

The final component of the first hypothesis postulates that institutions such as the military and correctional facilities may provide adults with resources that facilitate their educational attainment. Astone and associates argue that exposure to educational opportunities while incarcerated may increase the likelihood of college entry of former inmates. It is important to note that conceptualizing incarceration as an educational opportunity contradicts the trends of the past twenty years which show that the decline in black males' college participation has coincided with an increase in the rate of incarceration among black males (Butterfield 2002). These arguments are summarized as follow:

Hypothesis 1a: Family poverty, nonintact families (other than a two-parent household), and many siblings will lower the chances of postsecondary enrollment for both males and females.

Hypothesis 1b: Having children will reduce the likelihood of college enrollment. The reduction will be greater for women than for men because many women, in addition to being employed full-time, are disproportionately burdened with a "second shift" that consists of household chores and child-rearing.

Hypothesis 1c: Having a spouse will increase the likelihood of college enrollment.

Hypothesis 1d: Being employed will reduce an adult's chances of postsecondary enrollment. Conversely, being unemployed will increase his/her chances of enrollment.

Hypothesis 1e: Military participation or incarceration will increase the rate of college enrollment because both institutions offer opportunities for adults to develop their educational skills and further their educational attainment.

Hypothesis 1f: Being an immigrant will increase the likelihood of delayed college enrollment.

The second set of arguments posits that individuals make self-assessments of their "probability of school success" based on their early cognitive ability or academic achievement. It follows then that the stronger the academic background the greater the likelihood an individual would choose to pursue a college education. Based on the work of Astone *et al.* (2000), I posit that although the 2000 sample has a weaker academic preparation relative to the 1994 sample³⁰, adults in the 2000 sample will have higher odds of delayed college enrollment depending on whether they experience early academic success while in high school.

It follows then that

Hypothesis 2: Adults with a relatively strong record of early cognitive ability or academic achievement will be more likely than adults with a weak academic background to enroll in a postsecondary educational institution.

Lastly, Astone and associates suggest that the value of schooling would be greater for adults whose parents earned some college education, had high educational expectations for their children, and provided non-material resources (i.e., educational expectations, discussions about college and so on) in support of a college education. Consequently,

³⁰ See Chapter 3 for a discussion on descriptive statistics for both samples.

Hypothesis 3: Individuals who receive educational support from key individuals will be more likely to enroll in college than individuals with poor support.

As with the findings reported in the two preceding chapters, I expect that black and white high school graduates will follow comparable patterns in their probability of college enrollment. But because blacks are more likely to come from poor socioeconomic backgrounds and experience greater academic deficits, I expect that the effects of costs and the probability of success on delayed college enrollment will have a greater negative impact on black adults than on white adults. The value of schooling as measured by parental support may have similar effects on the college enrollment of blacks and whites given that, as discussed in Chapter 3, receiving about equal levels of support. I expect that males' and females' chances of college entry will differ by experiences that are more common to their gender group.

Descriptive Results

The descriptive statistics reported in Table 6.1 shows that the gender disparity favoring women persists among adults who delayed college enrollment several years after high school completion. Table 6.1 shows that although the black gender gap favors black women (56% of black males versus 60% of black females) it is substantially smaller than that observed for in the 1994 sample (see Table 4.2 in Chapter 4: 17% gender gap favoring black females). This finding suggests that for black males the greatest loss of talent occurs early on, when high school graduates have the option to pursue a college education immediately after completing high school. As the analysis in Chapter 4 indicates, this may be the case because many young black adults, particularly black males, choose employment rather than the college track immediately after high school. It appears that several years after high school completion both black men and black women experience less of a gender disparity in their entry into a postsecondary

educational institution. While the gender disparity among older black adults appears less severe, the high participation of older black men is not sufficient to narrow the acute gender disparity in college enrollment that blacks experience early on in their adult lives. As a result, the overall gender gap in college access remains significant for black adults.

The white gender gap, on the other hand, is constant between the “on-time” and “delayed” enrollees. Table 6.1 shows that the gender gap favoring white women is 8% (39% for white males versus 47% for white females). This gender disparity is similar to the gender gap observed among the 1994 sample (see Table 4.3, 70% for white males versus 77% white females). This is the case because in both samples white males chose employment and to a lesser extent military service over a college education at a higher rate than their female counterparts. This finding must be evaluated in conjunction with the fact that the majority of both black and white students enrolled in college soon after high school completion.

The next section will explore: what explains adults’ decisions to delay college enrollment? How do early and post-high school experiences affect the enrollment patterns of black males and white males? Although both black and white males experience a gender disadvantage in delayed enrollment, the difference is more skewed among whites. Why is this the case? The exploratory analysis shown in Table 6.1 suggests that the rate of employment may partially explain the college participation of older adults. Does this finding hold after controlling for high school background and post-high school trajectories?

Table 6.1. Postsecondary Status by Race and Gender for the 2000 Sample

| Student status | Black males | Black females | White males | White females |
|---|-------------|---------------|-------------|---------------|
| Enrolled in a college between 1995 and 2000 | 56% | 60% | 39% | 47% |
| Employed | 37 | 34 | 53 | 51 |
| Military Service | 1 | <1 | 5 | <1 |
| Not employed or enlisted in military | 6% | 5% | 2% | 3 |
| N | 142 | 141 | 931 | 910 |

Note: Descriptive statistics are weighted and adjusted for two-stage sampling design using the statistical program STATA. Unweighted sample size is reported. Missing values are excluded from calculation of means. Columns may not add to 100% due to rounding.

Multivariate Results

As Table 6.1 shows, the sample size for the delayed enrollees is substantially smaller than the “on-time” sample of 9,044 because the delayed sample excludes all students who reported attending a postsecondary educational institution between 1992 and 1994. To ensure that tests of significance are able to detect significant differences, I eliminated those predictors which have weak associations with the dependent variable (see Appendix A) or that are not significant predictors across race and gender groups of delayed college entry (see Appendix I) to arrive at the parsimonious models presented in Table 6.2. This strategy maintains a sample size that consists of a ratio of at least 10 cases per predictor for the purpose of ensuring high statistical power (Newton and Rudestam 1999). This method reduced the number of background indicators and identified parent college expectations as the only indicator of parental support. Because none of the indicators of academic disengagement are significant predictors, they also are excluded from multivariate analysis.

The first set of hypotheses argues that if the economic cost or lack of opportunities to promote college enrollment is too high older adults will not enroll in an institution of higher education. Two findings contradict hypothesis 1a; they include the effects of family structure and number of siblings on college enrollment. For both black females and white males, their odds of college enrollment are reduced for students living in a two-parent household. Family structure had no effect on the odds of college enrollment for black males and white females. This finding is puzzling and contrary to research on postsecondary enrollment. However, results from Astone *et al.* (2000) analysis indicate that the effect of family structure may not be consistent across groups. In their analysis, living in a two-parent household through age 16 has no effect on the college entry of black men and black women. Another finding that is not supported by Hypothesis 1a is

the effect of sibling size on college enrollment. Number of siblings has no effect on the college enrollment of all four race by gender groups.

The effect of socioeconomic status supports Hypothesis 1a which asserts that family resources, measured by socioeconomic status, have a positive effect on college enrollment of older adults. Family material resources provide a buffer that reduces the cost of college enrollment for black males, black females, and white males. For these groups, being from a middle-class family increases the odds of college enrollment several times higher than for similar students from more economically disadvantaged background (odds of 3.54 for black males, 4.94 for black females, and 2.51 for white males). An examination of the semi-standardized odds ratios shows that for black males and black females family resources exert the strongest influence on who enters college several years after high school completion. For white males, parent college expectations is the strongest predictor of delayed college enrollment followed by socioeconomic status. The effect of parental educational expectations is discussed under Hypothesis 2.

Hypothesis 1b posits that adults, particularly women, with children are less likely than adults with no children to enroll in college because they have more time constraints and financial responsibilities. The results do not support this hypothesis. Having children has no effect on the chances of delayed college entry of any race by gender group.

The results also do not support the argument (Hypothesis 1c) that being married increases the likelihood of college participation. The findings support the opposite that being a single, unmarried woman significantly increases the college enrollment of both black females and white females. Being a single black female who is not married or living in a marriage-like relationship increases a black female's odds of college enrollment by almost seven times higher ($\exp[\beta_{\text{enrolled/never enrolled}}]=6.80$) than that of

married black women. For black females, being single is a strong predictor of delayed college enrollment, only socioeconomic status and student educational expectations exert a greater explanatory power on college enrollment. Among white females, the odds of college enrollment are significantly higher for single white women than for married white women (odds of 1.76).

The findings partially support Hypothesis 1d which posits that employment reduces an adult's access to higher education. Both black and white males are less likely to enroll in college if they were employed within the first two years after high school (the odds of .13 and .32 for black males and white males, respectively). This suggests that employment immediately after high school reduces the likelihood that young adult men will return to school to pursue a postsecondary education later in their adult lives.

Hypothesis 1e is also partially supported. White males who enlist in the military immediately after high school have higher odds of college entering compared to their white male counterparts who did not enlist in the military ($\exp[\beta_{\text{enrolled/never enrolled}}]=2.50$). However, military participation has no effect on the postsecondary enrollment of black males, black females, or white females. It is important to note that black males re-enlist in the military at a higher rate than any other group. This suggests that many black men build a career in the military thus military participation is unlikely to impact their chances of going to college. Among the four statistically significant measures of white males' delayed college enrollment (SES, parental educational expectations, military participation, and employment), military participation ranks third in its influence on college entry followed by employment. The section of hypothesis 1e that is not supported is the association of incarceration and college enrollment. Table 6.2 shows that incarceration has no effect on the postsecondary enrollment of any group of students.

Hypothesis 1f is supported but only for black females. Black immigrant women are more likely than non-immigrant black women to enroll in a college after delaying

postsecondary enrollment for several years ($\exp[\beta_{\text{enrolled/never enrolled}}]=59.77$). The effect of being an immigrant on delayed college enrollment is not significant for any other group. This may be the case because as Chapter 5 demonstrates the majority of foreign-born black males enrolled in college immediately after high school, resulting in a very small pool of black males on the delayed college-enrollment track. In addition, there are few immigrants in the white sample for this status to have a substantive impact on the postsecondary trajectories of white adults.

Measures of cognitive ability and academic achievement during middle school and high school (Hypothesis 2) have no effect on the odds of delayed college enrollment. Specifically, being held back a grade, high school grades, and test scores are not significant predictors of delayed college enrollment.

Lastly, hypothesis 3 posits that strong social support will reduce the costs or difficulties associated with college enrollment at later stages in adulthood. Parent educational expectations are the strongest predictor of white males' postsecondary enrollment (odds of 1.09) followed by socioeconomic status. It is the only indicator of support considered in the parsimonious model because the other indicators are not strong predictors of college entry (see Appendix I). This finding suggests that white males with high levels of college encouragement from their parents early in high school are more likely than other white males who did not receive such support to enroll in college several years after high school completion.

Table 6.2. Effects of Predisposition Factors and Experiences After High School on Delayed Postsecondary Enrollment, by Race and Gender (Exponentiated Odds Ratios of Binary Logistic Regression)

| Variables | Blacks | | Whites | |
|---|---------|----------|-----------|-----------|
| | Males | Females | Males | Females |
| <i>Background Characteristics</i> | | | | |
| Immigrant | 2.30 | 59.77*** | 1.72 | 1.00 |
| Two parent household | 1.58 | 33* | .64* | .84 |
| Number of siblings | 1.05 | 1.10 | .99 | .97 |
| Socioeconomic Status | 3.54** | 4.94*** | 2.51*** | 1.23 |
| <i>Academic preparation</i> | | | | |
| Held back a grade | 2.75 | .53 | .62 | .75 |
| High school grades | .86 | .87 | .97 | .99 |
| Standardized composite of reading and mathematics test scores | 1.05 | .99 | .99 | 1.03 |
| <i>Parent support</i> | | | | |
| Parent college expectations | 1.16 | .87 | 1.09*** | .93 |
| <i>Outlook in high school</i> | | | | |
| Student college expectations | 1.05 | 1.46** | 1.10 | 1.22*** |
| <i>Post high-school experiences, between 1992 and 1994</i> | | | | |
| Single | 2.29 | 6.80** | 1.63 | 1.76* |
| Has dependent children | 1.00 | .95 | 1.24 | 1.56 |
| Employed | .13** | .75 | .32*** | .90 |
| Enlisted in military | 1.49 | .46 | 2.50* | .67 |
| Arrested | .46 | 2.43 | .70 | .61 |
| Chi-square | 50.6*** | 38.85*** | 104.92*** | 194.18*** |
| Pseudo R ² | .30 | .37 | .27 | .23 |
| N | 142 | 141 | 931 | 910 |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. Weighted sample size is reported in the last row.

*=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Summary

The focus of this chapter was to explore how early family and school experiences and postsecondary trajectories during the first two years after high school influence the college enrollment patterns of adults who failed to persist in the traditional college track. The findings reveal that some early as well as post-high school experiences are important in understanding who gains access to higher education many years after high school completion. With a few exceptions, it demonstrates that resources that reduce barriers or increase access to college entry play a similar role in the enrollment patterns of black males, black females, white males, and white females. Specifically, a set of hypotheses was tested to identify which factors reduce the costs of college enrollment. The second set of hypotheses assessed whether prior cognitive ability and academic achievement affect adults' estimate of their probability of success in college. The argument is that adults who have strong academic background are more likely to believe that they will be successful in college and thus pursue a college education. The third hypothesis investigated the effects that the effects of social support factors in increasing the likelihood of delayed college enrollment.

The results reveal important findings. First, cost of college entry is the primary reason why many adults who did not persist in the traditional college track do not pursue a college education later in their adult lives. Specifically, the lack of family resources and time to pursue a college education creates barriers for many pursuing higher education. The findings reveal that males are less likely than females to follow the traditional college track largely because males choose to enter the labor market immediately after high school, and this trajectory reduces the available time an individual has to pursue a college education. In fact, employment is one of the most powerful reasons why black males do not continue their education after high school. However, enlistment in the armed forces within the first two years after high school has a positive

effect on the postsecondary enrollment of white males only. In the case of white males, military participation appears to be a vehicle for gaining access in higher education.

Another factor that affects the college entry of a non-traditional student is limited family resources. Socioeconomic status is positively related to black females and white males' delayed college enrollment. Family affluence increases black females' and both black and white males' likelihood of delayed college entry. It is important to note that the effect of SES is greater for black females than on black males.

A gender-specific finding is the effect of being married on college entry. Astone's *et al.* (2000) formulation that spousal support may reduce barriers to college entry is not supported by this study. The results show that pursuing a college education is a more difficult endeavor for married women than for single women a pattern that is consistent for both black and white women. Since they are in their childbearing years, perhaps married women may plan to have children, thus reducing their likelihood of going to college. Presumably, single women are not burdened with the responsibility of providing financial resources and non-material support for multiple individuals, and thus they are more likely to have the time to pursue a college education.

Although the 2000 sample consists of students who are less academically prepared than the 1994 sample, the expectation is that an association, perhaps a weak relationship, would exist between academic preparation and college attendance. The findings indicate that all measures of probability of success or academic preparation do not predict the college enrollment of nontraditional college students. Since those with higher academic preparation went to college, there is little remediation in academic preparation for this group to make a difference. This suggests that how well an individual performed in school is less relevant as they get older. The factors that matter more are family resources and experiences after high school.

Lastly, college attendance continues to be affected by the value that adults and their key influential individuals established early on during the high school years. Early educational expectations increase the rate of enrollment for both black women and white women. Similarly, parent educational expectations increase white males' odds of going to college.

CHAPTER 7

TOWARDS AN UNDERSTANDING OF

RACE BY GENDER POSTSECONDARY OUTCOMES

Reports on the educational progress of American students show that for the past 25 years girls have outpaced boys in postsecondary enrollment. In addition, recent data have shown that gender differences in postsecondary enrollment are not consistent across racial/ethnic groups. This emerging educational stratification raises questions on whether postsecondary trajectories are gendered and specific to a student's racial group membership. The current research investigates the gender gap in postsecondary education by analyzing how students' backgrounds and the resources they accrue during high school affect the postsecondary trajectories of males and females from two racial groups.

I identify several factors or resources that are important for promoting or reducing access to higher education and have been shown to affect differences in schooling outcomes across gender and racial groups. Academic preparation, family support, school support, academic engagement, and disposition towards education are established as key resources that students must accrue during middle school and early in high school to predispose them towards a college education (Hossler *et al.* 1989). While the literature on postsecondary enrollment has established the strength of the associations between college predisposition resources and postsecondary enrollment, few studies have

addressed the recent enrollment trends in higher education and empirically investigated whether these indicators of college predisposition matter equally for males and females across racial/ethnic groups (exceptions include Coleman 2001; Oburn 1991; Plank and Jordan 2001; Wimberly 2000). The absence of this contribution implies that postsecondary trajectories are similar across race by gender groups despite ample evidence that shows that students experience different rates of participation in higher education on the basis of their race/ethnicity, gender, and social class (King 2000; Plank and Jordan 2001; Wimberly 2000).

To investigate this issue, two subsamples of high school graduates are drawn from the National Educational Longitudinal Study of 1988. The first subsample is used to predict the “on-time” enrollment in two- and four-year colleges of high school graduates soon after high school completion. The second subsample is used to predict the “delayed” enrollment of adults who did not enroll in college within two years after high school completion. Using multivariate analysis, I explore whether the effects of predisposition factors on the gender gaps are the result of differences in levels of resources that males and females accrue, the relative payoff that males and females receive, or a combination of these two possibilities.

Three general themes emerge from this research. First, black and white students’ path to college entry varies by college type. Black and white high school graduates are more dissimilar in their paths to enrollment in a two-year college than in a four-year college. Second, indicators of college predisposition are related differently for males and females across racial groups. Specifically, male high school graduates’ chances of college entry are more sensitive to negative academic measures and positive adult support in the home and school. These patterns are similar for black and white males, but are stronger for black males. In contrast, black and white female high school graduates are more sensitive to behavior and motivation indicators and better able to

convert their academic assets for postsecondary enrollment. Despite these gender similarities across racial groups, black males and females are less able to convert their assets for postsecondary enrollment. The disparity may be due to resource differences in the environments that blacks and whites live and learn or discrimination in college admissions.

Third, the path to college entry for older adults is centered on their gendered experiences after high school. Young women are affected more strongly by experiences that offer enough time to pursue a college education such as being single, and young men by opportunities that facilitate postsecondary enrollment such as military participation. Generally, males and females across racial groups continue to be strongly influenced by their parents' socioeconomic status.

Researchers interested in understanding social stratification in other educational outcomes should focus on this study because it illuminates how factors that have been traditionally associated with racial differences in educational outcomes (family and school characteristics, academic preparation, family and school support, academic disengagement) are implicated in the educational outcomes of specific race by gender groups.

How college predisposition factors matter, and for whom?

I began this research by identifying five distinct and interrelated theoretical ideas about the mechanisms that shape the postsecondary trajectories of minority students. They include academic preparation, parental influence, school influence, academic disengagement, and educational disposition (that is, college expectations and future plans). Academic preparation has been understood as both a precursor and a consequence of school outcomes. In both cases, the focus is on early school experiences

such as cognitive ability, student-teacher interactions, learning opportunities, and parental influence that shape future schooling outcomes. For example, academic preparation has been conceived as evidence of biased treatment against black males (Davis and Jordan 1994; Gordon *et al.* 1996; Hudley and Hall 1997; Noguera 1996; Polite 1993), lack of school-level resources to adequately address the academic needs of minority students (Noguera 2003a), lack of learning opportunities for minority students to demonstrate competency in areas needed for college admissions (Oakes 1985), and a vicious cycle in which minority students enter school with weak cognitive skills that are compounded over their schooling years because of weak parental and school resources (Farkas 1996). That is, academic preparation can be measured as both a predictor of schooling outcomes as well as an outcome of prior educational experiences. In this study academic preparation is conceived as a precursor of postsecondary enrollment, notwithstanding the multiple mechanisms that have affected a student's academic preparedness.

Educational research has established that how well a student performs academically has definite consequences on later school outcomes (Horn 1997). This pattern is supported by the findings of this study. Controlling for student background and other aspects of college predisposition, the results demonstrate that the black gender gap in the four-year colleges is entirely explained by academic measures. At the two-year and four-year college levels, academic indicators also explain a great deal of the white gender gap in enrollment. These black and white patterns are consistent for the on-time enrollment of high school graduates.

Additional analysis was conducted to determine whether predisposition factors affect differently the postsecondary enrollment of black males, black females, white males, and white females. This race by gender analysis reveals that the effects of academic preparation are associated differently for males and females across racial

groups. For example, being held back is associated more negatively with black males' and white males' on-time, four-year college enrollment, although the negative effect is stronger on black males. In contrast, earning good grades and high test scores matter more for black females' access to four-year colleges and white females' access to two- and four-year institutions.

The analysis on delayed enrollment of high school graduates reveals that prior cognitive ability and achievement have no effect on the postsecondary enrollment of males or females across racial groups. This suggests that academic preparation matters only for those high school graduates who are contemplating postsecondary enrollment immediately after high school completion. Although those who delayed enrollment are less academically prepared, their experiences after high school—not their prior academic history—have a greater influence on their chances of college entry later in their adult lives.

The impact of academic preparation on the black and white gender gaps is comparable with other studies that find that a student's academic preparedness is by far the strongest predictor of postsecondary enrollment (Adelman 1999; Alexander *et al.* 1978; Alexander *et al.* 1982; Berkner *et al.* 1997; Hossler *et al.* 1989; St. John 1991; Tuttle 1981) and early measures such as grade retention have long-term effects on students' postsecondary future (Brooks-Gunn *et al.* 1993; Jimerson *et al.* 2002). However, this study sheds light on the impact of academic preparation by showing that it only matters for students who may follow the traditional college track, that is, enroll in college soon after high school completion. Traditional male students not only obtain a weaker academic preparation but they are less able to convert their academic assets for college enrollment than their female counterparts. Black males are more disadvantaged than white males because black males are more likely to accrue less academic capital (Kleinfeld 1998). It is important to note that black and white females receive similar

rates of return for doing well in school. However, because black students experience fewer learning opportunities and attend resource-poor schools, black females obtain a weaker academic preparation than they would have otherwise obtained in a resource-rich schooling environment (Lee and Bryk 1989).

The second hypothesis focuses on parental influences. Theories and empirical research on parental involvement show that parents employ a variety of strategies to positively influence their children's educational success. The effectiveness of parental involvement on educational outcomes depends on a child's developmental age as well as gender (Catsambis and Suazo-García 1999; Muller 1998). Parental involvement that is school-based is associated more strongly with males' educational outcomes, while strategies that are centered in the home such as verbal interactions and nurturing are related more favorably with females' (Muller 1998). The current research supports these gendered patterns of parental effectiveness in that parental school involvement is predictive of black males' and white males' on-time enrollment in four-year institutions. Parental educational expectations are also predictive of white males' delayed college enrollment. These results demonstrate that parental support which is school-centered affects favorably the schooling outcomes of male students. An important aspect to note is that males and females across racial groups did not differ in their perception of how much support their parents offered. Thus, the results indicate that males' low rates of college enrollment are not due because parents are providing less support but because they need more parental support to close the gender gap in college attendance.

The third hypothesis is on school influence. The research shows that the type of school a student attends determines the richness of student-teacher interactions and the resources available to nurture students' path towards higher education. Generally, private and high-SES schools offer greater learning opportunities such as advanced placement courses, a college preparatory curriculum, and a college orientation program

that tailor students' tastes and preferences according to their parents' and schools' expectations. In contrast, features such as being a public and low-SES school are proxies for poor teacher quality and limited learning opportunities (Kozol 1992; Oakes 1985). In these schools students can do well academically when they are exposed to educational programs that increase student-teacher contacts (Stanton-Salazar and Dornbusch 1995).

While this study shows a negative public school effect, it is difficult to attribute the effect to the organizational features of public high schools or to selection bias. Perhaps parents invest in their childrens' education by sending their academically gifted children to private school. A teacher or counselor's expectations are very important for promoting white males' enrollment in four-year institutions. Being an immigrant provides a huge boost in black males' four-year college enrollment perhaps because immigrant students tend to receive additional assistance in schools to ensure their academic success (Stanton-Salazar and Dornbusch 1995). Or perhaps, immigrant students are more likely to go to college because they are less susceptible to negative construction of black students as an inferior group in American schools (Noguera 2003a).

In contrast, black and white females have a lower probability of attending a four-year college when they attend a public or low-SES high school. Girls are disproportionately affected by these institutional features perhaps because they do not have access to the opportunities that would allow them to amass the academic capital that disproportionately benefits their access to higher education (Persell, Catsambis, and Cookson 1992). It is also possible that the negative public school effect may reflect parents' disproportionate investment in their daughters' education by sending their daughters to a private high school. Consequently, the weaker students remain in public high schools. Thus, the public school effect may reflect the student population in public high schools, not the institutional features of these schools.

The fourth hypothesis, academic disengagement, encompasses theories about peer influence and oppositional culture. The literature on peer influence posits that academic disposition is influenced or shaped by peer groups. The oppositional culture framework argues that U.S.-born black students believe that education will not generate economic returns similar to those of whites because racial discrimination limits how far a black person can climb the occupational opportunity structure. Moreover, the perception is that a black person must reject his/her black culture and pride and adopt white behaviors and life styles (Ogbu and Simons 1998) to achieve academic and economic success. Thus, academic excellence is perceived as "acting white". To avoid such a label and negative peer sanctions, black students reduce their academic effort and consequently underperform academically.

This study offers limited support for both theories. Academic disengagement as measured by peer importance on educational matters, dropping out of school, and misbehavior has no effect on the black gender gap in two- or four-year college enrollment. This means that black males' low college enrollment is not rooted in their academic disengagement. School misbehavior has a direct, negative effect on black females' four-year college enrollment only. In contrast, academic disengagement modestly affects the white gender gap in two and four-year college enrollment. Specifically, school misbehavior is negatively related with white males' two-year college enrollment only. Having friends who dropped out of school is negatively related to white females' enrollment in four-year institutions only. These patterns make clear that black males' low college enrollment does not result from an oppositional culture. In reality, it is black females and white students who are more strongly affected by academic disengagement.

The final hypothesis focuses on students' future outlooks on a college education. This set of theories suggests that a student's chances of going to college depend on his or

her college expectations and options for economic mobility (Hossler *et al.* 1989). The findings show that college expectations are associated more strongly with black females' on-time enrollment in two- and four-year colleges. The effect of college expectations on white high school graduates is positively related with males' and females' enrollment in two- and four year colleges. College expectations favor more strongly white females' enrollment, although the gender difference is statistically significance and quite small. In addition, early college expectations disproportionately benefit black and white females' college entry later in their adult lives. The positive effect of college expectations may reflect a young woman's embrace of American rhetoric on the importance of education for future success as well as the belief that her academic effort will be fairly rewarded in the occupational opportunity structure. Young women's college expectations may also represent the educational environments in which they learn. These environments are byproducts of 30 years of nationwide efforts under Title IX to end sex discrimination in school programs and activities in order to bring about gender equity in schools and society at large (Riordan 2003; U.S. Department of Education 1997). Perhaps, because of the magnitude of this intervention, girls and young women across American classrooms see the merits in advancing their education because they can pursue careers that accommodate their multiple needs and desires in their private and public spheres (Mickelson 2003). The private represents family and community life and the public encompasses career and civic life (Mickelson 2003). Thus, many young women may expect to earn a college education to pursue careers in teaching, nursing, and social service, occupations which historically have accommodated women's desires to have a family and a promising career (Mickelson 2003).

Another component of the future outlook hypothesis is the rational choice model. A central premise of the rational choice framework is that the decision to pursue a college education is based on a rational evaluation of the costs—cost of a college

education and foregone earnings— and benefits—expected economic returns—of competing options. Consistent with other research, this study shows that while this premise holds it is conditional on a student's experiences that are shaped by his or her gender position (Beattie 2002). For example, the findings show that males are more sensitive to economic opportunities. If they are employed immediately after high school, both black and white males are less likely to pursue a college education later in their adult lives. On the other hand, women may be aware that they will earn less and experience a job ceiling fairly quickly without a college education, so immediate employment may not affect their long-term likelihood of going to college. An important aspect to note is that this analysis does not control for earnings. It may be the case that earnings are associated more strongly than employment with college attendance. Whether a woman is single or married, however, is central to a woman's chances of college enrollment because these experiences may measure how much time and support she has to pursue a college education. Being single is by far, more beneficial for a woman's chances of college enrollment. This may be the case because married women may have less financial pressure to encourage them to pursue a college education. However, given the large number of married women participating in the labor force, this explanation may be less plausible. Alternatively, married women or women in married-like relationships may be less likely to go to college because they expect to raise a family soon or carry a heavier burden of family and household responsibilities (Hochschild 1989), and therefore have less support and time to pursue a college education.

In addition to employment, military plans and participation offer another explanation for why students may choose to pursue a college education. The findings show that black and white students with early plans to join the military are less likely to enroll in a postsecondary educational institution immediately after high school completion. This pattern supports the notion that alternative plans to a college education

deter students from immediate college entry, although the patterns do not appear clear cut by race and gender.

The analysis on the delayed enrollment of high school graduates presents a clearer pattern. The finding reveals that military enlistment increases a white male's chances of postsecondary attendance later in his adult lives. Although this effect is not significant for any other group, the coefficient for black males is positive suggesting that military participation is associated with black males' college entry but the smaller black sample makes it difficult to detect statistical significance. Perhaps the lack of association indicates that military participation is unrelated to black males' college entry. The latter interpretation questions whether military participation yields similar benefits for black males and white males.

A general trend present throughout these results is that the college entry of black males and white males are related to similar factors, particularly for predicting enrollment in four-year institutions. Furthermore, being black disadvantages black males and black females in a similar manner in that being black reduces a student's chances of college entry compared to those of white students. This suggests that there is no distinctive feature about being black *and* male. Moreover, the fact that the chances of college entry of black males are unrelated to dispositions towards education provides tremendous opportunities for educators and policy makers to support the college access of black males and other students.

Policy Recommendations

The current study has important implications for educational policy makers. The first step is for educators and policy makers to consider the theoretical ideas and empirical evidence that demonstrate how the resources that students accrue prior to completing high school are implicated in their futures. With this knowledge, policy makers can then create or modify existing programs to meet the educational needs of our diverse student population.

Because measures of academic ability and achievement prove to be the strongest indicators that not only affect black and white high school graduates' access to higher education but also explain the black and white gender disparities in postsecondary enrollment, policy makers should consider initiatives promoting less differentiation in the types of learning opportunities to which students of various social groups are exposed. Such initiatives are likely to help students from public and low-SES high schools because generally these institutions have few advanced placement courses or a college preparatory curriculum that offer students the opportunity to do well in the areas required for college admissions. In addition, public and low-SES high schools have high student-teacher ratios which limit school personnel on how soon they begin to inform and assist students through the college enrollment process (McDonough 1999). Thus, initiatives that focus on ensuring that all comprehensive high schools offer advanced placement courses and college preparatory curriculum with few options for students to deviate from a college-bound curriculum are likely to improve the chances of college entry for all students but for black and white females in particular since they are more likely not to go to college if they attend a resource-poor high school.

The curriculum recommendations launched in the 1980s as a response to the landmark report, *A Nation At Risk*, generated several school reforms that improved

considerably the academic preparation of American students (National Commission on Excellence in Education 1983). These recommendations have reached their limit because not every public school offers students a curriculum of equal rigor. To strengthen their effectiveness, key advocacy organizations such as the American Association of University Women, National Urban League, and National Association for the Advanced of Colored People should lead school districts and the federal government in creating greater equity in course selection among American students.

The disproportionate rate that black males, and to a lesser extent black females and white males, are held back a grade has important policy implications for curriculum development and teaching practices. Teachers should become aware that grade retention as an intervention does not remediate achievement, and furthermore, non-academic factors are strongly associated with the likelihood of a student being held back. Although some scholars have found that students who are held back do better academically the second time they repeat a grade (Entwisle *et al.* 1997), extensive evidence demonstrates that grade retention has no long-term benefits (Hauser 1999; Hauser *et al.* 1997; Heubert and Hauser 1999). Students who are retained are more likely to face additional academic difficulties, drop out of school, and never enrolling in a college (Jimerson and Kaufman 2003). Rather than hoping through grade retention that students would catch-up academically, schools should identify the areas in which poor performing students experience academic difficulties. Instead of holding students back a grade, schools can address academic weaknesses by providing one-on-one remedial instruction or intensive enrichment programs with a low student-teacher ratio.

The educational literature also emphasizes the importance of adult sponsorship the academic success of minority students (Kerckhoff and Campbell 1977; O'Connor 2000; Stanton-Salazar and Dornbusch 1995; Turner 1960). This study shows that parental school involvement and teacher expectations are important for black males and

white males' postsecondary enrollment. Therefore, educators attempting to reduce gender disparities should expand extracurricular activities in schools to attract male students' participation. Activities such as competitive sports, arts and music, and acting may motivate boys to participate. It is important that these activities be made available to both girls and boys. As discussed, schools with a wide variety of resources are especially beneficial to females' postsecondary enrollment. In addition, schools should encourage parents to volunteer and become involved in student events and activities. School-sponsored activities are likely to encourage parents' involvement in schools which in turn may motivate male students to pursue a college enrollment. However, it may be economically difficult to institute extracurricular activities given that in the past several years these programs have been reduced or eliminated because of budget cuts.

Expanding school resources and increasing parental involvement in schools may also influence greater student-teacher interactions. This institutional feature may already be present in schools that serve immigrant students through enrichment programs to assist in English literacy and other academic areas. Thus, school districts should expand student-teacher contacts outside the classroom as well as encourage teachers to demonstrate high expectations to their students. This may be difficult because a teacher may feel less efficacious if his or her student is not doing well in school. However, this study shows that regardless of a student's circumstances teacher expectations matter a great deal. When teachers have high expectations, controlling for a student's background characteristics, achievement levels, academic engagement, and expectations, white males' chances of college entry are increased.

Initiatives outside of schools are also important for improving the odds of older adults who delay college enrollment. This study shows that experiences after high school as well as parental resources play a greater role on whether an adult is likely to enroll in a postsecondary educational institution. Black males and white males who are employed

within the first two-years after high school are less likely to enroll in a postsecondary educational institution. One option for improving males' odds of enrollment is to expand current initiatives that create partnerships between high schools and area colleges to expose students at an early age to careers that require education beyond high school (Bailey *et al.* 2002). Current initiatives show that the opportunity to enroll in a community college while in high school may allow students to become comfortable with the academic and social requirements of college life and begin to think more seriously about their academic preparation while in high school (Bailey *et al.* 2002).

Another important finding is that military plans are negatively related to black and white males' immediate college enrollment. Black males may plan to join the armed forces early during their high school years because they perceive the military as having less racial barriers and discrimination for economic mobility. However, enlistment in the military within the first two years of high school strongly influences white males' college entry only, although the relationship was positive for black males. The implication is that military participation may be both an economic alternative as well as a bridge to gaining access to higher education, and therefore a positive alternative to immediate college enrollment for young men. Given these findings, it may be beneficial for the federal government to extend financial assistance for postsecondary education to soldiers in active duty as well as assistance for transitioning into postsecondary education after completing military service.

Lastly, black females' and white females' single status has implications for educators as well. Through school programs, young girls can learn how to set goals and plan for their future so that they can accommodate their multiple desires as wives, mothers, and career women.

Directions for Future Research

The current study represents a first step in understanding how race and gender shapes student experiences and disproportionately affect their postsecondary educational careers. It identified three key measures of academic achievement (grade retention, high school grades, and test scores) that explain black and white gender disparities in postsecondary educational outcomes. Given that high grades exert the strongest influence on gender differences in college entry, future research should explore whether high school grades represent other dimensions of academic preparation such as gender disparities in course-taking. This detail may reveal further how academic preparedness is achieved by girls and boys.

Immigrant status is a very important predictor for young black males' immediate college enrollment and black females' delayed college enrollment. This issue lands squarely on the hotly contested debate on whether culture explains differences in U.S.-born and foreign-born blacks educational outcomes. This study shows that culture as measured by an anti-achievement ethic did not explain the black gender gap. This finding is consistent with quantitative studies that show no relationship between academic disengagement and black-white achievement gap (Ainsworth-Darnell and Downey 1998; Cook and Ludwig 1997; Ferguson 2001b). Future research should expand the definition of culture beyond that proposed by Ogbu and associates to measure other plausible explanations of achievement disparities. For example, recent research documents that blacks have multiple identities or frames of reference that shape their actions and understanding of the world in which they live and learn (López 2003; O'Connor 1999). Furthermore, blacks' racial identities may also be developed through a process that is less dichotomous (black versus white) than that asserted by the "acting-white" hypothesis (Noguera 2003a). For example, Noguera suggests that immigrant minorities' "'newness' in the U.S. social landscape protests them" from educational

practices that frame blacks as a racially inferior group (Noguera 2003a:53). This protection allows immigrant minorities to maintain their high academic self-concept that comes from being a majority in their society. As a result, they achieve academic performance and persist through secondary education at higher rates than their U.S.-born counterparts. These aspects of culture can be captured with measures of academic self-concept. In addition, an investigation of teachers' evaluation and practices on the educational outcomes of U.S.-born and foreign-born blacks may also reveal differential treatment by teachers.

This study also raises intriguing questions about the role of military participation on young adults' on-time and delayed postsecondary enrollment. Who enlists in the military and why? That is, do students enter the military because they do not qualify for admissions at a postsecondary educational institution? Does military participation yield similar benefits for males and females across racial/ethnic groups? Do the benefits impact males' and females' chances of college entry later in their adult lives? These questions are beyond the scope of the NELS dataset but should be explored with other survey data that provide richer information about adults' post-high school experiences and military participation.

Other important questions are concerned with the effects of employment on postsecondary education. What types of jobs are black and white males taking after high school that draw them away from postsecondary education? Is delayed college enrollment also affected by the economic returns of employment? That is, is it that young men's employment yields substantial economic returns or that once they are employed young men are unwilling to forego earning an income to pursue a college education? These questions may be explored using NELS by identifying indicators for type of occupation, job satisfaction, and expected earnings from employment.

These suggestions may be incorporated in the next phase of this research study. I plan to expand this study by including Latino students, a fast, and growing population in American schools. Future research should investigate how students' background and the resources they accrued in high school interact with the institutional features of their college to influence their college persistence and completion. Research questions under consideration include: What effects do predisposition factors have on male and female students' persistence and completion? Which institutional characteristics mediate the effects that students' predisposition have on postsecondary persistence and completion? And, what characteristics of postsecondary institutions can promote the college success of minority males and females?

Conclusion

Understanding the postsecondary trajectories of minority students is more important than ever before. Recent court challenges on affirmative action policies at institutions of higher education threaten to reverse the growing trend in minority students' access in higher education and further reduce the proportion of minority males attending college. The current study is a first step to unraveling the complex interrelationships among personal, environmental, and institutional factors affecting the postsecondary success of minority women and men.

Some scholars may perceive this study as another research agenda that focuses on the schooling failures of black males. In contrast to prior research, this study is driven by the recognition that a college education continues to offer adults greater economic rewards and a better quality of life than enjoyed by high school graduates. The importance of understanding minority students' lack of participation in higher education is therefore paramount. Through a comparison of males' and females' postsecondary

trajectories across black and white high school graduates, this study provides insight into how the predisposition phase promotes and hinders minority students' access to higher education. It reveals that black males are quite resilient. As many black males as females persist through high school completion. Although black males enroll in college at a lower rate than their female and white counterparts, black males participate in meaningful activities after high school. By examining early school experiences, this study shows that black male high school graduates are academically engaged but lack the resources that would otherwise increase their chances of going to college. This suggests that there is nothing culturally wrong with the "black brothers". The real problem is that families and schools are investing less on males, but even less so on black males. My hope is that these contributions will expand our understandings of the processes that set minority males and females on different educational trajectories and bring greater attention to how gendered experiences influence racial stratification in educational attainment.

APPENDIX A

**Table A. Pearson Correlation Coefficients
between College Attendance and Predisposition Factors**

| Predisposition Factors | 1994 Sample | | 2000 Sample |
|--|------------------------------|------------------------------|--------------------|
| | Community college enrollment | Four-year college enrollment | College enrollment |
| <i>Background characteristics</i> | | | |
| Black | -.016 | -.046*** | .091*** |
| Male | -.029** | -.057*** | -.019 |
| Immigrant | .002 | .024* | .035 |
| Two parent household | -.017 | .155*** | -.069** |
| Number of siblings | -.015 | -.103*** | .018 |
| Socioeconomic Status | -.069*** | .388*** | .249*** |
| Public school | .068*** | -.188*** | -.053* |
| School percent minority | .046*** | -.078*** | .086*** |
| School percent of students on free lunch | .010 | -.176*** | -.070** |
| Urban | -.028** | .073*** | .103*** |
| <i>Academic preparation</i> | | | |
| Repeated a grade | .041*** | -.227*** | -.042* |
| High school grades | -.153*** | .503*** | .011 |
| Standardized reading and mathematics test scores | -.143*** | .482*** | .091*** |

Correlation (continued)

| Predisposition Factors | 1994 Sample | | 2000 Sample |
|--|------------------------------|------------------------------|--------------------|
| | Community college enrollment | Four-year college enrollment | College enrollment |
| <i>Parent and school support</i> | | | |
| Parent college expectations | -.036*** | .340*** | .166*** |
| Parent academic discussions | .000 | .038*** | .174*** |
| Parent school involvement | -.090*** | .276*** | .124*** |
| Parent social supervision | .008 | .107*** | .057* |
| Teacher expectations | -.031** | .200*** | .022 |
| <i>Academic disengagement</i> | | | |
| Peer academic perception‡ | -.010 | .175*** | .070** |
| Number of dropouts among peers | .059*** | -.229*** | -.080*** |
| School misbehavior | .033** | -.189*** | .002 |
| <i>Future outlooks</i> | | | |
| Student college expectations | -.032** | .440*** | .210*** |
| Plans to join armed forces | -.001 | -.084*** | |
| <i>Post-high school experiences, 1992-1994</i> | | | |
| Single | | | .088*** |
| Dependent children | | | .019 |
| Employed | | | -.124*** |
| Enlisted in military | | | .053* |
| Arrested | | | .051* |
| N | | 7,907 | 2,124 |

Note: Correlations are weighted. Unweighted sample size is reported. Missing values are excluded from calculation of means. ‡=Peer academic perception is coded so that high values indicate positive academic outlook. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

APPENDIX B

**Table B.1. Effects of Background Characteristics on Postsecondary Enrollment
Semi-Standardized Exponentiated Odds Ratios of
Multinomial Logistic Regressions**

| Background characteristics | Black | | White | |
|--|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .68*** | .66*** | .79*** | .73*** |
| Immigrant | 1.01 | 1.14 | 1.06 | 1.06 |
| Two parent household | 1.12 | .95 | 1.11** | 1.31*** |
| Number of siblings | .83 | .80* | .87*** | .84*** |
| Socioeconomic Status | 1.12 | 1.91*** | 1.78*** | 3.52*** |
| Public school | .83 | .59*** | .90 | .76*** |
| School percent of students on free lunch | 1.00 | .90 | 1.08 | .85*** |
| School percent minority | .95 | 1.05 | .81*** | .88** |
| Urban ³¹ | 1.22 | 1.07 | .98 | 1.06 |
| Chi-square | 110.81*** | | 965.55*** | |
| Pseudo R ² | .09 | | .13 | |
| N | 1,137 | | 7,907 | |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

³¹Schools that are classified as suburban or rural are not statistically significant from each other; and are not statistically significant predictors of college enrollment.

APPENDIX C

Table C.1. Effects of Academic Preparation on the Postsecondary Enrollment of Black High School Graduates (Exponentiated Odds Ratios of Multinomial Logistic Regression) (N=1,317)

| Academic preparation | Model I | | Model II | | Model III | |
|--------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .48** | .53** | .49** | .63 | .48*** | .54* |
| Repeated a grade | .84 | .33*** | | | | |
| High school grades | | | 1.07 | 1.60*** | | |
| Standardized test scores | | | | | 1.02 | 1.10*** |
| Chi-square | 110.38*** | | 202.22*** | | 164.44*** | |
| R ² | .10 | | .14 | | .13 | |

Note: Each model controls for immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

**Table C.2. Effects of Academic Preparation on the Postsecondary Enrollment of White High School Graduates
(Exponentiated Odds Ratios of Multinomial Logistic Regression) (N=7,907)**

| Academic Preparation | Model I | | Model II | | Model III | |
|--------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled | Two-year vs. never enrolled | Four-year vs. never enrolled |
| Male | .66*** | .61*** | .73*** | .80** | .64*** | .56*** |
| Repeated a grade | .62*** | .17*** | | | | |
| High school grades | | | 1.30*** | 2.00*** | | |
| Standardized test scores | | | | | 1.05*** | 1.16*** |
| Chi-square | 1,042.69*** | | 1,567.25*** | | 1,352.62*** | |
| R ² | .15 | | .24 | | .22 | |

Note: Each model controls for immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

APPENDIX D

**Table D.1. Full Model Predicting Black Postsecondary Enrollment
(Semi-Standardized Exponentiated Odds Ratios of Multinomial Logistic
Regression)**

| Predisposition Indicators | Model I | | Model II | |
|---|------------------------|-------------------------|----------|-----------|
| | Two-year ³² | Four-year ³³ | Two-year | Four-year |
| Male | .71** | .84 | .71** | .85 |
| <i>Student background</i> | | | | |
| Immigrant | 1.06 | 1.11 | 1.05 | 1.11 |
| Two parent household | 1.12 | .93 | 1.14 | .97 |
| Number of siblings | .82 | .77* | .81 | .79* |
| Socioeconomic Status | 1.09 | 1.49*** | 1.02 | 1.28* |
| Public school | .82 | .56*** | 0.86 | .59*** |
| School percent minority | .94 | .99 | .95 | .97 |
| School percent of students on free lunch | 1.01 | .96 | 1.01 | .95 |
| Urban | 1.22 | 1.15 | 1.22 | 1.17 |
| <i>Academic preparation</i> | | | | |
| Repeated a grade | .96 | .77* | .97 | .78* |
| High school grades | 1.11 | 2.12*** | 1.09 | 2.12*** |
| Standardized reading and mathematics test scores | 1.11 | 1.47** | 1.11 | 1.52** |

³²Two-year college versus never enrolled.

³³Four-year college versus never enrolled.

Table D.1 (continued)

| Variables | Model I | | Model II | |
|----------------------------------|----------|-----------|----------|-----------|
| | Two-year | Four-year | Two-year | Four-year |
| <i>Parent and school support</i> | | | | |
| Parent college expectations | | | 1.14 | 1.38* |
| Parent academic discussions | | | 1.05 | 1.12 |
| Parent school involvement | | | 1.12 | 1.52*** |
| Parent social supervision | | | 1.01 | 1.02 |
| Teacher expectations | | | 1.24 | 1.07 |
| <i>Educational disengagement</i> | | | | |
| Peer academic perception‡ | | | | |
| Number of dropouts among peers | | | | |
| School misbehavior | | | | |
| <i>Future outlooks</i> | | | | |
| Student college expectation | | | | |
| Plans to join armed forces | | | | |
| Chi-Square | | 204.43*** | | 268.28*** |
| Pseudo R ² | | .16 | | .18 |

Table D.1 (continued)

| Predisposition Indicators | Model III | | Model IV | |
|--|-----------|-----------|----------|-----------|
| | Two-year | Four-year | Two-year | Four-year |
| Male | .71** | .84 | .73** | .90 |
| <i>Student background</i> | | | | |
| Immigrant | 1.04 | 1.10 | 1.02 | 1.08 |
| Two parent household | 1.16 | .95 | 1.18 | .96 |
| Number of siblings | .81 | .80 | .80 | .81 |
| Socioeconomic Status | 1.01 | 1.27 | .98 | 1.23 |
| Public school | .85 | .58 | .91 | .62*** |
| School percent minority | .94 | .99 | .97 | 1.00 |
| School percent of students on free lunch | 1.01 | .94 | .98 | .93 |
| Urban | 1.21 | 1.18 | 1.19 | 1.15 |
| <i>Academic preparation</i> | | | | |
| Repeated a grade | .97 | .79* | .97 | .79+ |
| High school grades | 1.16 | 2.06*** | 1.07 | 1.98*** |
| Standardized reading and mathematics test scores | 1.10 | 1.51** | 1.01 | 1.36* |

Table D.1 (continued)

| Variables | Model III | | Model IV | |
|----------------------------------|-----------|-----------|----------|-----------|
| | Two-year | Four-year | Two-year | Four-year |
| <i>Parent and school support</i> | | | | |
| Parent college expectations | 1.13 | 1.40* | 1.01 | 1.24 |
| Parent academic discussions | 1.06 | 1.06 | 1.02 | 1.03 |
| Parent school involvement | 1.12 | 1.50** | 1.15 | 1.58** |
| Parent social supervision | 1.00 | 1.05 | .97 | 1.01 |
| Teacher expectations | 1.23 | 1.06 | 1.17 | .98 |
| <i>Educational disengagement</i> | | | | |
| Peer academic perception‡ | .09 | 1.00 | 1.05 | .97 |
| Number of dropouts among peers | .95 | .85 | 0.97 | .87 |
| School misbehavior | 1.10 | .85 | 1.06 | .82 |
| <i>Future outlooks</i> | | | | |
| Student college expectation | | | 1.48** | 1.55** |
| Plans to join armed forces | | | .75** | .66*** |
| Chi-Square | | 283.91*** | | 307.86*** |
| Pseudo R ² | | .19 | | .21 |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ‡=Peer academic perception is coded so that high values indicate positive academic outlook. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05. +=statistically significant at p=.06.

**Table D.2. Full Model Predicting White Postsecondary Enrollment
(Semi-Standardized Exponentiated Odds Ratios of Multinomial Logistic
Regression)**

| Variables | Model I | | Model II | |
|---|------------------------|-------------------------|----------|-----------|
| | Two-year ³⁴ | Four-year ³⁵ | Two-year | Four-year |
| Male | .85*** | .88** | .87*** | .90* |
| <i>Student background</i> | | | | |
| Immigrant | 1.07 | 1.05 | 1.07 | 1.04 |
| Two parent household | 1.09* | 1.19*** | 1.08* | .16*** |
| Number of siblings | .86*** | .81*** | .87*** | .82*** |
| Socioeconomic Status | 1.67*** | 2.74*** | 1.52*** | 2.25*** |
| Public school | .90 | .78*** | 0.93 | .82** |
| School percent minority | 1.12* | .93 | 1.10* | .90 |
| School percent of students on free lunch | .79*** | .86** | .79*** | .85** |
| Urban | .99 | 1.08 | .99 | 1.09 |
| <i>Academic preparation</i> | | | | |
| Repeated a grade | .96 | .86*** | .96 | .85*** |
| High school grades | 1.65*** | 3.32*** | 1.58*** | .99*** |
| Standardized reading and mathematics test scores | 1.25*** | 2.15*** | 1.19*** | 2.03*** |

³⁴Two-year college versus never enrolled.

³⁵Four-year college versus never enrolled.

Table D.2 (continued)

| Variables | Model I | | Model II | |
|----------------------------------|-------------|-----------|-------------|-----------|
| | Two-year | Four-year | Two-year | Four-year |
| <i>Parent and school support</i> | | | | |
| Parent college expectations | | | 1.22*** | 1.56*** |
| Parent academic discussions | | | 1.13** | 1.22*** |
| Parent school involvement | | | 1.07 | 1.39*** |
| Parent social supervision | | | 1.03 | .98 |
| Teacher expectations | | | 1.09* | 1.26*** |
| <i>Academic disengagement</i> | | | | |
| Peer academic perception‡ | | | | |
| Number of dropouts among peers | | | | |
| School misbehavior | | | | |
| <i>Future outlooks</i> | | | | |
| Student college expectation | | | | |
| Plans to join armed forces | | | | |
| Chi-Square | 1,790.57*** | | 1,829.30*** | |
| Pseudo R ² | .28 | | .28 | |

Table D.2 (continued)

| Variables | Model III | | Model IV | |
|--|-----------|-----------|----------|-----------|
| | Two-year | Four-year | Two-year | Four-year |
| Male | .88*** | .90* | .90* | .96 |
| <i>Student background</i> | | | | |
| Immigrant | 1.07 | 1.04 | 1.07 | 1.04 |
| Two parent household | 1.08 | 1.14** | 1.08 | 1.15*** |
| Number of siblings | .87*** | .82*** | .88** | .84*** |
| Socioeconomic Status | 1.52*** | 2.28*** | 1.48*** | 2.13*** |
| Public school | .93 | .82** | .94 | .83** |
| School percent minority | 1.10* | .92 | 1.10* | .91 |
| School percent of students on free lunch | .79*** | .85** | .80*** | .88* |
| Urban | .99 | 1.0 | .98 | 1.08 |
| <i>Academic preparation</i> | | | | |
| Repeated a grade | .96 | .84*** | .97 | .85** |
| High school grades | 1.52*** | 2.82*** | 1.48*** | 2.66*** |
| Standardized reading and mathematics test scores | 1.19*** | 2.04*** | 1.14* | 1.88*** |

Table D.2 (continued)

| Variables | Model III | | Model IV | |
|----------------------------------|-------------|-----------|-------------|-----------|
| | Two-year | Four-year | Two-year | Four-year |
| <i>Parent and school support</i> | | | | |
| Parent college expectations | 1.22*** | 1.55*** | 1.05 | 1.13 |
| Parent academic discussions | 1.08 | 1.14* | 1.03 | 1.07 |
| Parent school involvement | 1.06 | 1.35*** | 1.04 | 1.31*** |
| Parent social supervision | 1.02 | .97 | 1.03 | 0.98 |
| Teacher expectations | 1.08* | 1.25*** | 1.04 | 1.19*** |
| <i>Academic disengagement</i> | | | | |
| Peer academic perception‡ | 1.13** | 1.18** | 1.10* | 1.12* |
| Number of dropouts among peers | .98 | .83** | 1.00 | .86*** |
| School misbehavior | .96 | .99 | .96 | .99 |
| <i>Future outlooks</i> | | | | |
| Student college expectation | | | 1.45*** | 2.27*** |
| Plans to join armed forces | | | .95 | .87** |
| Chi-Square | 1,829.30*** | | 1,928.49*** | |
| Pseudo R ² | .28 | | .30 | |

Note: Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ‡=Peer academic perception is coded so that high values indicate positive academic outlook. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05. +=statistically significant at p=.06.

APPENDIX E

Table E.1. Effects of Teacher expectations on the Postsecondary Enrollment of Black High School Graduates, Controlling for Indicators of College Predisposition.

(Exponentiated Odds Ratios of Multinomial Logistic Regression) (N=1,137)

| School Support | Model I: Controls only | | Model I & Academic preparation | | Model I & Parent support | | Model I & Academic disengagement | | Model I & Future outlooks | |
|---------------------|------------------------|-------------------------|--------------------------------|-----------|--------------------------|-----------|----------------------------------|-----------|---------------------------|-----------|
| | Two-year ³⁶ | Four-year ³⁷ | Two-year | Four-year | Two-year | Four-year | Two-year | Four-year | Two-year | Four-year |
| Male | .47*** | .46** | .50** | .71 | .48*** | .45** | .48*** | .46** | .54** | .56* |
| School expectations | 1.75* | 1.83* | 1.77* | 1.52 | 1.62 | 1.48 | 1.73* | 1.79* | 1.44 | 1.31 |
| Chi-square | 127.43 | | 220.04 | | 158.19 | | 135.44 | | 171.9 | |
| R ² | .09 | | .16 | | .11 | | .11 | | .13 | |

Note: Each model controls for sex, immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

³⁶Two-year college versus never enrolled.

³⁷Four-year college versus never enrolled.

Table E.2. Effects of Teacher expectations on the Postsecondary Enrollment of White High School Graduates, Controlling for Indicators of College Predisposition.

(Exponentiated Odds Ratios of Multinomial Logistic Regression) (N=7,907)

| | Model I: Controls only | | Model I & Academic preparation | | Model I & Parent support | | Model I & Academic disengagement | | Model I & Future outlooks | |
|---------------------|------------------------|-------------------------|--------------------------------|-----------|--------------------------|-----------|----------------------------------|-----------|---------------------------|-------------|
| | Two-year ³⁸ | Four-year ³⁹ | Two-year | Four-year | Two-year | Four-year | Two-year | Four-year | Two-year | Four-year |
| Male | .65*** | .55*** | .74*** | .78** | .68*** | .60*** | .69*** | .61*** | .73** * | .72*** |
| School expectations | 1.61*** | 2.93*** | 1.43 | 2.22 | 1.26*** | 1.83*** | 1.50*** | 2.60*** | 1.20* | 1.72** * |
| Chi-square | 1,107.47 | | 1,610.09 | | 1,314.31 | | 1,203.93 | | 1,380.25 | |
| R ² | .15 | | .26 | | .19 | | .17 | | .21 | |

Note: Each model controls for sex, immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

³⁸Two-year college versus never enrolled.

³⁹Four-year college versus never enrolled.

APPENDIX F

Table F.1. Effects of Academic Disengagement on the Postsecondary Enrollment of Black High School Graduates, Controlling for Indicators of College Predisposition. (Exponentiated Odds Ratios of Multinomial Logistic Regression) (N=1,137)

| Academic disengagement | Model I: Controls only | | Model I & Academic preparation | | Model I & Parent and school support | | Model I & Future Outlooks | |
|---------------------------------------|------------------------|-------------------------|--------------------------------|-----------|-------------------------------------|-----------|---------------------------|-----------|
| | Two-year ⁴⁰ | Four-year ⁴¹ | Two-year | Four-year | Two-year | Four-year | Two-year | Four-year |
| Male | .47*** | .45*** | .51** | .72 | .48*** | .46** | .54** | .57* |
| Peer academic perception ^a | 1.35 | 1.18 | 1.38 | 1.42 | 1.19 | .86 | 1.14 | .91 |
| Number of dropouts among peers | .86 | .59* | .88 | .71 | .87 | .58* | .90 | .66 |
| School misbehavior | 1.15 | .50** | 1.19 | .67 | 1.16 | .52* | 1.10 | .47* |
| Chi-square | 127.34 | | 223.07 | | 177.43 | | 176.83 | |
| R ² | .10 | | .17 | | .13 | | .15 | |

Note: Each model controls for sex, immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ^a=Peer academic perception is coded so that high values indicate positive academic outlook. significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

⁴⁰ Two-year versus never enrolled.

⁴¹ Four-year versus never enrolled.

Table F.2. Effects of Academic Disengagement on the Postsecondary Enrollment of White High School Graduates, Controlling for Indicators of College Predisposition.
(Exponentiated Odds Ratios of Multinomial Logistic Regression) (N=7,907)

| Academic disengagement | Model I: Controls only | | Model I & Academic preparation | | Model I & Parent and school support | | Model I & Future Outlooks | |
|---------------------------------------|------------------------|-------------------------|--------------------------------|-----------|-------------------------------------|-----------|---------------------------|-----------|
| | Two-year ⁴² | Four-year ⁴³ | Two-year | Four-year | Two-year | Four-year | Two-year | Four-year |
| Male | .68*** | .68*** | .76*** | .81* | .70*** | .63*** | .75*** | .76** |
| Peer academic perception ^a | 1.52*** | 1.91*** | 1.54*** | 2.04*** | 1.27* | 1.28* | 1.25* | 1.30* |
| Number of dropouts among peers | .82* | .41*** | .92 | .57*** | .88 | .49*** | .93 | .52*** |
| School misbehavior | .75*** | .48*** | .92 | .96 | .76*** | .48*** | .80** | .55*** |
| Chi-square | 1,105.96 | | 1,654.75 | | 1,357.95 | | 1,563.05 | |
| R ² | .16 | | .27 | | .20 | | .22 | |

Note: Each model controls for sex, immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ^a=Peer academic perception is coded so that high values indicate positive academic outlook. significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

APPENDIX G

⁴² Two-year versus never enrolled.

⁴³ Four-year versus never enrolled.

Table G.1. Effects of Future Outlooks on the Postsecondary Enrollment of Black High School Graduates, Controlling for Indicators of College Predisposition.

(Exponentiated Odds Ratios of Multinomial Logistic Regression) (N=1,137)

| Future Outlooks | Model I: Controls only | | Model I & Academic preparation | | Model I & Parent and school support | | Model I & Academic disengagement | |
|----------------------------------|------------------------|-------------------------|--------------------------------|-----------|-------------------------------------|-----------|----------------------------------|-----------|
| | Two-year ⁴⁴ | Four-year ⁴⁵ | Two-year | Four-year | Two-year | Four-year | Two-year | Four-year |
| Male | .54** | .56* | .55* | .85 | .54** | .54* | .54** | .57* |
| Student educational expectations | 1.25*** | 1.48*** | 1.24*** | 1.35*** | 1.22** | 1.38*** | 1.24*** | 1.47*** |
| Plans to join the armed forces | .50* | .41*** | .49* | .45** | .49** | .34*** | .49* | .39*** |
| Chi-square | 159.96 | | 222.21 | | 198.35 | | 176.83 | |
| R ² | .13 | | .19 | | .14 | | .15 | |

Note: Each model controls for sex, immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

⁴⁴ Two-year versus never enrolled.

⁴⁵ Four-year versus never enrolled.

Table G.2. Effects of Future Outlooks on the Postsecondary Enrollment of White High School Graduates (N=7,907), Controlling for Indicators of College Predisposition. (Exponentiated Odds Ratios of Multinomial Logistic Regression).

| Future Outlooks | Model I: Controls only | | Model I & Academic preparation | | Model I & Parent and school support | | Model I & Academic disengagement | |
|----------------------------------|------------------------|-------------------------|--------------------------------|-----------|-------------------------------------|-----------|----------------------------------|-----------|
| | Two-year ⁴⁶ | Four-year ⁴⁷ | Two-year | Four-year | Two-year | Four-year | Two-year | Four-year |
| Male | .72*** | .72*** | .79** | .92 | .74*** | .72*** | .75*** | .76** |
| Student educational expectations | 1.34*** | 2.15*** | 1.27*** | 1.70*** | 1.28*** | 1.87*** | 1.30*** | 2.03*** |
| Plans to join the armed forces | .88 | .72* | .88 | .70* | .85 | .67** | .88 | .72* |
| Chi-square | 1,376.62 | | 1,753.77 | | 1,568.45 | | 1,563.05 | |
| R ² | .21 | | .29 | | .22 | | .22 | |

Note: Each model controls for sex, immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. *=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

⁴⁶Two-year versus never enrolled.

⁴⁷Four-year versus never enrolled.

Appendix H

T-Test Analysis to Determine Statistical Significance between Males' and Females' Multinomial Logistic (MNL) Coefficients

T-test formula =

$$\frac{b_1 - b_2}{[(se^2_1/N_1) + (se^2_2/N_2)]^{1/2}}$$

b_1 =black male MNL coefficient b_2 =black female MNL coefficient

se^2_1 = black male standard error squared, N_1 = black male sample size=523

se^2_2 = black female standard error squared, N_2 =black female sample size=614

Degrees of Freedom= $N_1 + N_2 - 2$

Table H.1. Multinomial Logitstic Coefficient and Standard Error of Full Model Predicting Black Males' and Black Females' Postsecondary Enrollment in Two-Year Colleges

| Variables | Black male | | Black Female | | T-test |
|--|-------------|----------------|--------------|----------------|--------|
| | Coefficient | Standard Error | Coefficient | Standard Error | |
| <i>Student background</i> | | | | | |
| Immigrant | 1.09 | .79 | -.61 | .67 | 38.67 |
| Two parent household | .26 | .33 | .38 | .31 | -6.45 |
| Number of siblings | -.12 | .09 | -.12 | .09 | -2.8 |
| Socioeconomic Status | .58 | .24 | -.52 | .23 | 79.08 |
| Public school | -.04 | .91 | -1.01 | .72 | 19.48 |
| School percent minority | -.01 | .10 | -.05 | .11 | 6.64 |
| School percent of students on free lunch | -.07 | .08 | .01 | .10 | -15.30 |
| Urban | .35 | .33 | .21 | .29 | 7.42 |
| <i>Academic preparation</i> | | | | | |
| Repeated a grade | -.07 | .31 | .15 | .36 | -10.91 |
| High school grades | -.01 | .11 | .04 | .08 | -8.96 |
| Standardized reading and mathematics test scores | -.01 | .02 | .01 | .03 | -10.65 |
| <i>Parent and school support</i> | | | | | |
| Parent college expectations | .01 | .11 | -.02 | .09 | 6.48 |
| Parent academic discussions | .30 | .34 | .11 | .37 | 8.78 |
| Parent school involvement | .40 | .33 | -.08 | .26 | 23.06 |
| Parent social supervision | -.12 | .15 | -.04 | .16 | -8.31 |

Table H.1 (continued)

| Variables | Black male | | Black Female | | T-test |
|--------------------------------|-------------|----------------|--------------|----------------|--------|
| | Coefficient | Standard Error | Coefficient | Standard Error | |
| Teacher expectations | .14 | .32 | .32 | .34 | -8.92 |
| <i>Academic disengagement</i> | | | .14 | .40 | -13.12 |
| Peer academic perception‡ | -.13 | .30 | | | |
| Number of dropouts among peers | -.03 | .32 | -.17 | .33 | 7.47 |
| School misbehavior | -.34 | .40 | .43 | .36 | -33.78 |
| <i>Future outlooks</i> | | | | | |
| Student college expectation | .11 | .09 | .26 | .08 | -28.87 |
| Plans to join armed forces | -.65 | .39 | -.90 | .35 | 11.20 |
| Chi-square | 240.02*** | | 224.46*** | | |
| Pseudo R ² | .18 | | .27 | | |
| N | 523 | | 614 | | |

Note: Each model controls for sex, immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ‡=Peer academic perception is coded so that high values indicate positive academic outlook. significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

Table H.2. Multinomial Logitstic Coefficient and Standard Error of Full Model Predicting White Males' and Females' Postsecondary Enrollment in Four-Year Colleges

| Variables | White male | | White Female | | T-test |
|--|-------------|----------------|--------------|----------------|--------|
| | Coefficient | Standard Error | Coefficient | Standard Error | |
| <i>Student background</i> | | | | | |
| Immigrant | 1.45 | .59 | -.68 | .74 | 53.76 |
| Two parent household | .08 | .31 | -.34 | .32 | 22.61 |
| Number of siblings | -.05 | .08 | -.15 | .08 | 21.49 |
| Socioeconomic Status | .40 | .23 | .16 | .26 | 16.43 |
| Public school | -1.65 | .62 | -2.40 | .74 | 18.73 |
| School percent minority | -.08 | .09 | .13 | .12 | -32.87 |
| School percent of students on free lunch | .04 | .08 | -.15 | .09 | 38.25 |
| Urban | .45 | .44 | .16 | .33 | 12.43 |
| <i>Academic preparation</i> | | | | | |
| Repeated a grade | -.90 | .34 | -.06 | .44 | -36.17 |
| High school grades | .28 | .11 | .41 | .08 | -22.72 |
| Standardized reading and mathematics test scores | .01 | .02 | .06 | .03 | -31.07 |
| <i>Parent and school support</i> | | | | | |
| Parent college expectations | .23 | .15 | .04 | .10 | 24.69 |
| Parent academic discussions | .04 | .41 | .13 | .42 | -3.24 |

Table H.2 (continued)

| Variables | White male | | White Female | | T-test |
|--------------------------------|-------------|----------------|--------------|----------------|--------|
| | Coefficient | Standard Error | Coefficient | Standard Error | |
| Parent school involvement | .85 | .30 | .48 | .31 | 20.07 |
| Parent social supervision | -.02 | .18 | .09 | .18 | -11.11 |
| Teacher expectations | .10 | .37 | -.41 | .34 | 24.05 |
| <i>Academic disengagement</i> | | | | | |
| Peer academic perception‡ | -.13 | .39 | -.10 | .40 | -1.30 |
| Number of dropouts among peers | .03 | .31 | -.58 | .37 | 30.22 |
| School misbehavior | -.19 | .41 | -.87 | .43 | 27.58 |
| <i>Future outlooks</i> | | | | | |
| Student college expectation | .14 | .12 | .34 | .09 | -30.89 |
| Plans to join armed forces | -1.09 | .31 | -.92 | .33 | -9.29 |
| Chi-square | 992.04*** | | 1,112.32*** | | |
| Pseudo R ² | .30 | | .30 | | |
| N | 3,849 | | 4,058 | | |

Note: Each model controls for sex, immigrant status, two-parent household, number of siblings, SES, public school, urban school, school percent minority, and school percent on free lunch. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ‡=Peer academic perception is coded so that high values indicate positive academic outlook. †=significant at .05; **=significant at .01; ***=significant at .001. All other values are not significant at .05.

APPENDIX I

Table I.1. Binary Logistic Regression Models To Determine Whether Indicators of Parental Support Predict Delayed College Enrollment (Exponentiated Odds Ratios)

| Parental support models | Black male | Black female | White male | White female |
|-----------------------------|------------|--------------|------------|--------------|
| Parent academic discussions | 1.08 | .76 | 1.40 | 1.26 |
| Chi-square | 55.76 | 36.64 | 105.95 | 180.61 |
| R-squared | .31 | .38 | .28 | .24 |
| Parent school involvement | 1.52 | .72 | 1.39 | 1.39 |
| Chi-square | 54.65 | 38.33 | 121.19 | 204.61 |
| R-squared | .31 | .39 | .28 | .24 |
| Parent social supervision | .72 | .71 | 1.05 | .99 |
| Chi-square | 59.07 | 38.68 | 119.81 | 181.00 |
| R-squared | .31 | .39 | .28 | .24 |
| N | 142 | 141 | 931 | 910 |

Note: Each model controls for sex, immigrant status, two-parent household, SES, indicators of academic achievement, parental college expectations, school college expectations, and post-high school experiences. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. All values are not significant at .05.

**Table I.2. Binary Logistic Regression Models To Determine Whether Indicators of Academic Disengagement Predict Delayed College Enrollment
(Exponentiated Odds Ratios)**

| Academic disengagement models | Black male | Black female | White male | White female |
|---------------------------------------|------------|--------------|------------|--------------|
| Peer academic perception ^a | 1.04 | 1.84 | 1.03 | .99 |
| Chi-square | 55.32 | 39.39 | 115.32 | 194.56 |
| R-squared | .31 | .39 | .28 | .24 |
| Number of dropouts among peers | .40 | 1.33 | .91 | .82 |
| Chi-square | 59.93 | 39.38 | 117.74 | 190.59 |
| R-squared | .32 | .38 | .28 | .24 |
| School misbehavior | 1.13 | .84 | 1.20 | 1.08 |
| Chi-square | 60.13 | 37.84 | 107.51 | 188.23 |
| R-squared | .31 | .38 | .28 | .24 |
| N | 142 | 141 | 931 | 910 |

Note: Each model controls for sex, immigrant status, two-parent household, SES, indicators of academic achievement, parental college expectations, school college expectations, and post-high school experiences. Sample is weighted and adjusted for two-stage sampling design using the statistical program STATA. Missing values have been imputed using AMELIA, a multiple imputation software program. ^a=Peer academic perception is coded so that high values indicate positive academic outlook. All values are not significant at .05.

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