RACE, EDUCATION AND SOCIAL REPRODUCTION: A STUDY OF EDUCATIONAL CAREERS IN THE UNITED STATES

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CHAPTER I

INTRODUCTION

In the United States, the education system is often considered the most promising path to alleviating social inequalities for disadvantaged racial groups. Thus, it is no surprise that racial and ethnic disparities in education have long been considered a social problem by social scientists. In fact, the goal of educational equality was and continues to be central to civil rights struggles (Wilson 1996). However, despite scholarly and political attention to this issue, racial inequalities remain at all levels of the educational system, and current empirical trends are not indicative of a large scale change toward more equality in education attainment (United States Department of Education 2007a, 2007b).

Since the inception of nationhood, African Americans and Latinos in the United States have consistently obtained less education and lower quality schooling compared to whites. While a history of hostility towards Black and Latino Americans has been well documented, this pattern has also been integrated into a general sense that incremental progress has been made on ‘the race problem’ since the emancipation of Black slaves in the 1860s (Loewen 1996; Philipsen 2003, Akom 2008). This belief in incremental progress has led many commentators to argue that racism is no longer a problem in the U.S., and remarkably, that white Americans are now disadvantaged by race-based entitlements and social programs designed to lift the social status of underprivileged racial and ethnic groups (cf. Barlow 2003: 184-187 for a discussion of the ‘reverse discrimination’ rhetoric).

These trends have given rise to what has been called ‘color-blind racism,’ the ideology that racial disparities in the U.S. should not be pointed out because to point out these disparities is
a racist practice in and of itself (Bonilla-Silva 1997, 2003). Color-blind racist ideologies suggest that since overt, legal racist practices have declined, racial minorities are no longer at a disadvantage and race based social programs are anathema to the American meritocratic system. Moreover, the tenets of color-blind ideology persist despite overwhelming evidence that suggests both stable and increasing inequality in the educational system. In fact, disparities remain in equal access to education, educational quality, and educational outcomes.

In terms of access, more individuals of all ages and all social groups are currently in the educational system in some way; however, there are differences in the type of educational opportunities that are available. Racial and ethnic minorities are more likely to attend schools in impoverished school districts, with high levels of behavioral problems among students, and characterized by substandard academic programming (Gamoran and Berends 1987; Kozol 1992; Epps 1995; Roscigno 1998, Hallinan 2001; Mickelson 2001; Kao and Thompson 2003; U.S. Department of Education 2007a, 2007b). For instance, in 2005, while only five percent of white fourth grade students attended schools with over 75% of students on free lunch, nearly half of all African American and of Latino fourth graders attended these types of schools (U.S. Department of Education 2007a).

Access to quality education at the primary and secondary levels is closely related to socioeconomic status. Because most school districts are funded through property taxes, school districts subsequently have as many resources as the residents of the community can provide (Wilson 1985, 1996). These local funding policies make access to quality education particularly difficult for racial minorities, given patterns of racial segregation in which minority families are disproportionately clustered in disadvantaged, underserved neighborhoods (Massey and Denton 1998; Rivkin 1994; Emerson, Chai and Yancey 2001). Further, high school grades and standardized test scores are often crucial factors in college admissions, meaning that inequalities
at the high school level often translate into differences in the type of colleges that students can attend.

In terms of achievement, trends suggest that some gains made in the past have stagnated in recent years. For instance, in 2005, 58% of African American and 53% of Latino fourth graders were classified as below average in reading ability, compared to 24% of white children. Further, while 51% of white students were at or above the proficiency level in reading, only 15% of Latino and 19% of African American students were achieving at this level (U.S. Department of Education 2007a). Among 12th graders, only six percent of African American and eight percent of Latino students were at or above proficiency in math, whereas 29% of white students were achieving at this level. Similarly, differentials on standardized college admissions tests such as the Scholastic Aptitude Test (SAT) remain with the gap, depending on the subject area, having either remained fairly consistent or grown somewhat over the past twenty years (U.S. Department of Education 2007a). While critiques of the standardized testing procedures employed in the U.S. educational system proliferate (cf. Persell 1977; Jencks and Phillips 1998), the use of these tests continue to be central to college admissions and national education policy.

Finally, these disparities at all levels of the educational system culminate in differences in educational attainment and adult outcomes. In 2005, whereas 31% of white adults had a bachelor’s degree or higher, only 17% of African Americans and 12% of Latinos had obtained this level of education. Similarly, while almost 11% of whites had a graduate degree only about 5% of African Americans and 3% of Latinos did. Many of these trends have not changed markedly in the past two decades (U.S. Department of Education 2007b). Again, these differences in educational outcomes also manifest in differences in life chances between racial groups in other areas of life including income, wealth, unemployment, health, incarcerations, and victimization (U.S. Census Bureau 2006; U.S. Department of Education 2007a, 2007b).
Sociological Perspectives on Educational Inequality

Scholars have extensively investigated determinates of educational attainment among U.S students. Broadly speaking, most studies of educational inequality take either a status attainment (Coleman 1966; Jencks et al. 1972; Sewell and Hauser 1975; Hauser and Featherman 1977) or social reproduction (Bowles and Gintis 1977; Bourdieu and Passeron 1977, Persell 1977) approach to explain the distribution of educational outcomes in contemporary society. Status attainment based studies typically assert that the education system is a mechanism for reducing ascribed inequality and making society more meritocratic, providing a system by which talent and ability can be identified, cultivated, and rewarded. Reproduction models tend to investigate how the educational system plays a role in the reproduction and perpetuation of social inequalities. Unlike status attainment models, inherent in the social reproduction framework is a questioning of the meritocratic nature of both the education system and the economic system more generally.

Bourdieu and Passeron (1977) proposed that the educational system is best seen as a dynamic system of selection and exclusion. This conceptualization implies that the effects of ascriptive categories on educational outcomes are often difficult to tease out in conventional empirical models. These authors suggest a model of an educational career, in which differential processes of selection and exclusion at various transitions (e.g., primary to secondary; secondary to post-secondary) may ‘retranslate’ the effects of ascriptive status on educational outcomes. The idea of an educational career suggests an analytic strategy that eschews years of education as the major outcome of interest as these types of analyses may obscure the effects of background variables on educational outcomes at different levels of an educational career. As Mickelson (2003: 1071) argues “the loci of discrimination are in the junctures and transitions that contribute to students; educational career trajectories and the social dynamics that unfold at these points.”

These transition points are affected by structural, cultural, and individual characteristics.
Therefore, at each stage of education, these characteristics may share a complex, unique relationship to a students’ racial background (Oakes 2002). This dissertation seeks to build on these arguments by examining a model of educational careers that considers how structural, cultural, and individual level characteristics shape racial differences in educational trajectories.

One area of educational research which uses an analytic framework consistent with the idea of educational careers is research influenced by the educational transitions (ET) model (Mare 1980; Mare 1993, Entswisle and Alexander 1993; Raftery and Hout 1993; Dauber, Alexander and Entswisle 1996; Aschaffenburg and Maas 1997; Breen and Jonsson 2000; Lucas 1999, 2001; Gamoran 2001, Pallis 2003; Mastekaasan 2005; Godsky and Jones 2007; Hansen 2007). However, most studies utilizing this framework have focused on economic class, school characteristics, and/or individual factors (e.g., level of aspirations) on educational outcomes. The current study expands the ET line of research by investigating how race as well as the typical structural, culture and individual factors affect educational transitions across educational careers. To this end, I examine three related research questions that speak to specific contributions that can be made in the contemporary literature on educational attainment by focusing on educational careers. Specifically, analyses presented in the current dissertation are designed to answer the following research questions:

1) How does race affect the likelihood of transitions to higher grade levels?

2) How do social psychological characteristics of students affect the likelihood of transitions to higher grade levels?

3) How do school level variables affect the likelihood of educational transitions?
**Question 1: Racial Differences**

As noted above, there are persistent racial inequalities in education in the United States. Scholars investigating racial disparities often look at how other factors may contribute to these inequalities. Research has not, however, often looked at the effect of race across student educational careers. The lack of focus on educational careers is unfortunate, because researchers do not know if racial background affects students more in the earlier or later grade levels. Recent research has found a “net college advantage” for Black and Latino students (Rivkin 1995; Bennet and Xie 2003; Bennet and Lutz 2007). This pattern indicates that net of family background factors such as family income and parents’ education Black and Latino students are more likely to enroll in post-secondary educational programs compared to white students. While many studies have been conducted on the net college advantage, rarely has research looked at how this pattern may be produced by a process that plays out across students’ educational careers. The current study will contribute to understandings of the net college advantage by investigating whether this pattern is apparent at early grade levels or is a process specific to college enrollment.

**Question 2: Social psychological effects**

Researchers interested in racial disparities in educational achievement and attainment often investigate how educational aspirations, educational expectations, self concept and locus on control may contribute to racial differences in education. (cf. Kerkhoff 1974; Wislon and Portes 1975; McClelland 1990a, 1990b; Majoribanks 1992; Mickelson 1990; Ainsworth-Darnell and Downey 1998; Gamoran 2001; Hallinan 2001; Johnson, Crosnoe and Elder 2001; Akom 2003; Horvat and Lewis 2003; Harris and Robinson 2007). However, these characteristics of students have mostly been absent from research on educational careers. To address this gap in the
literature, I incorporate the social psychological components of sociological models of education by investigating how individual expectations, locus of control, positive self-concept, and parental aspirations may lead some students to be excluded from the educational system. Moreover, I investigate how these social psychological attributes are related to social positioning.

Typically, survey researchers find that while social psychological characteristics do have significant impacts on educational outcomes, they do not explain racial differences in these outcomes using standard analytical models (i.e., linear models for years of education, test scores, or grades). Incorporating these types of variables into an education transitions model can allow us to identify if these characteristics have effects at specific moments in educational careers and may allow for identification of links between social psychological characteristics and student outcomes that are obscured using standard methods. Additionally, the analyses pursued utilize these variables as time-varying covariates in an effort to better specify how they relate to student educational careers.

**Question 3: School level effects**

Another important factor which contributes to continuing racial and ethnic educational inequality is that members of minority groups, compared to whites, do not attend schools that are comparable in terms of academic programming. This line of research has its roots in the civil rights struggles over equal access and the merits of busing and has continued to be explored to this day with contemporary analytical techniques (Coleman 1966, Kozol 1992, Roscigno 1998, 2000, Mickelson 2001, Klugman 2003, Hill 2007). Due to segregated housing patterns and local funding for schools, minority groups are more likely to attend less effective schools compared to their white counterparts. Although investigations of ‘school effects’ has become more common in recent years, school effects have not been widely incorporated into models of educational
careers (Klugman 2003, Hill 2007). Specifically, examining school level variables in the context of educational careers will allow an investigation of whether school effects on educational attainment are apparent at later stages of educational careers; therefore elucidating if school placements are another way that social background characteristics translate into differences in educational outcomes. Given the strong relationship between race and school quality, this question may be instructive for disentangling how race impacts individual student trajectories.

**An Educational Career Model**

By investigating three related research questions, this dissertation seeks to build a model of educational careers. Studying educational careers differs from other approaches in that educational career studies use time as an integral factor in their analyses, and examine how the effects over key variables may change over time. Thus, in each case it may be found that some characteristics have different effects over time. Such patterns have been found in some research (e.g., the net college advantage; Bennet and Xie 2003). Nevertheless, there is little integration across areas looking at different independent variables (i.e., studies of race in college enrollment, studies of educational transitions, studies of social psychological factors), and scholars rarely look at how these patterns may be related. By looking at these issues in tandem, I seek to begin a discussion of these issues that integrates the work of multiple areas in educational research. While one study will not provide all of the answers to these questions, the goal of this dissertation is to provide a starting frame by which these issues can be further explored by investigating how three major correlates of educational attainment operate over students’ educational careers.

This dissertation proceeds as follows: chapter two describes the history of racial differences in education in the United States and describes how changing regimes of racism are linked to popular and scholarly understandings of the role of race and ethnicity in society.
Chapter three reviews the sociological literature on the correlates of educational attainment with a focus on the factors analyzed here. Chapter four describes the data and methods used in this research. Chapter five reports the results of the statistical analyses, while chapter six provides a discussion of these findings in relation to current knowledge about racial disparities in educational attainment.
CHAPTER II

HISTORICAL BACKGROUND

Before moving to a review of the sociological literature on educational attainment, I first review the historical background of race and education in the United States. Because the main focus of this dissertation is to understand more clearly the processes by which racial disadvantage is reproduced, this review of the historical trajectory of race and education dating back to slavery provides the necessary context needed to interpret contemporary outcomes. Tracing the past in this manner allows for an understanding that the present situation of educational inequalities is not necessarily the inevitable confluence of historical patterns. Rather, my goal is to show that the processes that shape current patterns of educational inequality began centuries ago and the perpetuation of racial inequality in the United States has been abetted throughout by individual prejudice, structural patterns, and government policies. This review demonstrates when African Americans and Latinos have gained momentum toward educational equality, this momentum was often short lived, and within a short period white Americans regained their structural advantages. Finally, this historical review will allow a careful dissection of various ideological justifications for racial inequality that set the stage for contemporary perspectives on race.

The history of African American and Latinos has been one of struggle and resistance to persistent disadvantage in society. As Sanchez (1997) notes, the history of these groups is one in which social relations between them and the dominant society were inherently racist; that is, these relationship were based on racist ideas and served to reproduce racial inequality. In addition to these similarities for African Americans and Latinos, there have also been critical differences
between the experiences of these groups in the United States. For instance, whereas African Americans were brought to this country by force, Latinos became defined as a racial group much later as a result of a complex mixture of social and political conditions. Due to these important differences, the critical moments in the histories of these groups occur at different times and places; nevertheless, both histories converge at the same point of contemporary educational disadvantage. The history of Black and Latino education in the United States demonstrates that racism, manifest in both structural conditions and individual prejudice, has consistently blocked full participation by African Americans and Latinos in the educational system.

**The Slavery Era 1619-1875**

Sometime around 1619 the first African slaves were brought to Virginia aboard a Dutch merchant vessel; at this time, the world slave trade was growing as private companies transported Slaves from West Africa to the West Indies, Portugal and Spain. However, a combination of desperate circumstances, plantation capitalism, and seemingly endless natural resources in North America would combine to make American slavery a unique and particularly pernicious institution (cf. Zinn 1995). Slavery became institutionalized both socially and legally throughout the 17th century as white settlers began to establish a more stable presence in North America. Throughout the 17th century, distinctions based on skin color became more important and ingrained as a mode to acquire the labor necessary to provide the foundation of a new nation.

Throughout the 18th century, permanent slavery for Africans became an accepted part of Colonial/American life, particularly in the Southern colonies. However, by the time of the American Revolution many northern states were beginning to urbanize and saw the need for slavery greatly diminished. While many of these states had freed most slaves by the time that the
U.S. Constitution was passed in 1787, belief in racial equality was not a normative social value in early America.

The United States Constitution does not mention education, reflecting the agrarian concerns of the framers of the document. Indeed, it is unlikely that the original framers of the Constitution would have ever foreseen that this omission would make education one of the most fiercely debated and litigated social issues in the history of the nation. Further, because there is no national education system, there are effectively 50 different education systems in the United States. This situation makes any attempt at summary likely to skirt key differences between locales and homogenize diverse experiences. For example, the slave codes of the slavery era explicitly prohibited teaching slaves to read or write. However, in 1823, Alexander Twilight, a free Black man in Vermont became the first African American to receive a Bachelor’s Degree in the United States at Middlebury College (Zinn 1995). Nevertheless, although some individuals were able to find opportunity, there was not widespread educational opportunity for African Americans.

The experience of Alexander Twilight is also notable because illustrates that there have always been substantial inequalities within both Black and Latino communities and these differences were often based on skin tone, hair texture and other traits (Frazier 1949; Keith and Herring 1991; Montalvo and Codina 2001; Hochschild and Weaver 2007). Some light skinned Black and Latino individuals were able to effectively pass as whites, allowing them access to social circles and amenities that were off limits to other members of their groups. Additionally, some Black social clubs, often at prestigious Universities, were rumored to only allow membership to those individuals that their believed had ‘desirable’ physical properties; namely, light skin and fine straight hair. Debates remain over the degree of colorism that still exists (cf. Gullickson 2005); however, this history reminds us that the experiences of individuals, while
shaped by racial backgrounds, are not wholly determined by them. Thus, it is important to be
cognizant of the sometimes substantial differences within oppressed minority groups.

As slavery began to diminish in the Northern states many districts began to create
separate schools for free Blacks. The first lawsuit brought which officially challenged segregated
education was a case decided by the Massachusetts Supreme Court in 1850. In *Roberts v. City of
Boston School District* (1850), Benjamin Roberts sued the city of Boston because his daughter
had to walk past an all white school to attend a segregated school in a different neighborhood. As
this case was decided during the slavery era, the Supreme Court of Massachusetts found that there
was nothing illegal about denying children equal education based on race. This decision
demonstrated that discrimination against African Americans was legal under the original U.S.
Constitution and Bill of Rights.

By 1850, slavery in the United States had grown to a scale unseen in other slave systems
around the world. Whereas in 1800 there was an estimated 900,000 slaves in the U.S.; by 1850
an estimated 3.2 million slaves were being held (U.S. Census Bureau 1851). The 1850 U.S.
census also counts about 500,000 free African Americans. The scarce data available on the
educational opportunities of these free African Americans suggests very limited educational
opportunity. For instance, whereas about 56% of white children between the ages of 5 and 20
were enrolled in school, only about 17% of the free African American population was.
Moreover, while about 27% of white Americans in their twenties could not read or write, the
comparable figure for African Americans was about 74% (U.S. Census Bureau 1850).

Another insight into the status of African Americans in the mid 19th century is the *Dred
Scott v Sandford* (1856) decision by the United States Supreme Court. In *Dred*, the court found
that under the Constitution, individuals brought to the United States and held as slaves could not
become citizens of the United States and that the federal government had no right to regulate
slavery in individual states or free individual slaves. The *Dred Scott* case has become an infamous example of the fact that African Americans were granted no rights or privileges under the initial U.S. Constitution, including access to education.

Between 1860 and 1865 the United States fought a civil war as 11 Southern states succeeded and the Northern states fought to reincorporate these territories. The degree to which the Civil War was fought over slavery has been long debated (cf. Vorenberg 2001; Ranney 2006). Nevertheless, there is little question that the continued enslavement of some 3 million people of African descent in the U.S. South and the question of whether the expansion of the United States would include slavery were central to the conflict. Moreover, the end of the war led to legislation that specifically addressed slavery (Zinn 1995; Loewen 1996). In the years following the Civil War, the U.S. Congress would pass the 13th, 14th and 15th amendments of the Constitution. The 13th amendment abolished slavery in the United States. The 14th amendment gave citizenship and equal rights under the law to freed slaves. The 15th amendment specifically gives all males the right to vote regardless of their race, color, or previous condition of servitude. Southern states desiring reentry into the United States were required to follow these new laws and the reconstruction era began. Unfortunately, the reconstruction era would become another example of how racial inequality would be perpetuated, even in light of legislative action specifically aimed at alleviating racial injustice.

*The Reconstruction Era 1865-1877*

During the reconstruction era, the federal government guaranteed rights for freed slaves in the former confederate states by military occupation and use of the new federal agency of the Freedman’s Bureau. However, the economic conditions and labor patterns of slavery persisted though much of this time, and there was continuous resistance to reconstruction in the South as
well as a series of legislative actions by states and the federal government which dealt with the legal status of former slaves. For instance, after the passage of the 13th Amendment, all of the former slave states enacted Black codes which set out to make freed slaves second class citizens under state and local laws. The federal government responded to these actions by passing the Civil Rights Act of 1866 which affirmed equal legal rights for all persons born in the United States. Eventually the 14th amendment was passed which gave citizenship, and thus protection under the Bill of Rights, to all persons born in the United States.

During the reconstruction era, there were major differences within the Black community in terms of opportunities for education. Many former slaves and their children had almost no access to educational facilities even in the occupied south, while some children attended small community schools funded and run independently by local Black communities, whereas others were able to attend integrated public schools. Nevertheless, it is clear that at the end of reconstruction little progress towards true educational equality was made and educational opportunity for Black Americans continued to lag behind that of their white counterparts; in 1870, Census estimated that about 35% of Black adults were illiterate, compared to only about 5% of white adults.

Westward Expansion and the Experience of Latinos

In the early 16th Century Spanish explorers first encountered Native Peoples in what is now the American Southwest (MacDonald 2004). In most accounts, the time between the initial conquering of this area by Spain and the subsequent defeat of Mexico and annexation of the Southwest by the United States is regarded as the formative period for minority education in North America. As the Southwest areas of Arizona, New Mexico, and western Texas were quite harsh geographically and not ideal locations for major agricultural business, these areas remained
relatively remote and isolated into the 19th century. During this period most Native children in the southwest were educated in settler’s schools, traditional familial settings or at Catholic missions (San Miguel Jr. 1997). The major goal of education for Natives at this time was to instruct them in the Spanish language and the Catholic faith.

It is difficult to draw generalizations about Native education during this time period as this area remained remote and rural throughout this time and experiences varied widely. Some Natives were captured and held as slaves whereas others were able to become doctrinarios, Natives educated in Spanish and utilized by Catholics to spread Catholicism to other Natives (MacDonald 2004). As time progressed in New Spain a distinct hierarchy developed in which three main groups developed. At the top of the hierarchy were native Spaniards that had come to North American and below them were the children of native Spaniards that were born in New Spain. Finally, indigenous peoples occupied the lowest rung of the social ladder.

In 1821, Mexico became independent from Spain. Echoing the ideals of the American and French revolutions, the new Mexican government granted nominal equality to all Mexicans regardless of color or origin, and codified educational access as a right of all Mexicans. However, although legal equality had been granted, status distinctions based on lineage and culture remained. For instance, in Mexican government documents at the time the term “gente de razon” (people of reason) was used to describe Mexicans that practiced Catholicism and other Spanish/Mexican cultural forms, to the exclusion of tribal Indians that were not religious converts. Further, rapid economic expansion in former frontier areas lead to increasing economic inequality as some individuals were able to take advantage of large areas of undeveloped land.

Although the Mexican Constitution made education a right of all Mexicans, it did not specify how schools would be funded or administered. Therefore, conditions varied widely by locality. In some areas, secular public schools were organized; in other areas the Catholic Church
retained control of education. Additionally, affluent individuals were often able to have their children educated by officials and merchants that had been educated in European universities. These students would be exposed to classic literature, international politics and geography, and other aspects of a Western liberal education. Those educated in public or parochial schools would see a more practical or religious based curriculum (MacDonald 2004).

Between 1836 and 1855, the United States conquered Mexico and annexed the southwestern states of Texas, Arizona, New Mexico, and parts of California. As the United States began to take and settle these lands, thousands of Mexican nationals found themselves foreigners in their native land. When white settlers from the U.S South began to migrate to these areas and new state constitutions were ratified, race, language, and religion based prejudices quickly eroded the status of the new Mexican Americans. Throughout the 19th century Mexican Americans would struggle for access to education in the southwestern United States. Again, conditions for Mexican Americans varied by locality. In areas such as Texas, where American nationalism was stronger Spanish speaking Mexicans were discriminated against and treated poorly. In areas such as New Mexico, the Mexican populations were able to turn numeric majorities into political power and a tradition of bilingual education was able to take hold (San Miguel Jr. 2003).

Due to rapid economic expansion at this time cities began to form, and education moved away from traditional or religious forms to schools more in line with addressing the concerns of growing urbanism. During this period a substantial number of Latinos were still being educated in Catholic or Protestant missionary schools. As more European Americans migrated into these areas the status of Latinos consistently declined, and by the early 20th century many Mexican children were segregated into "Mexican Schools," which were either separate buildings or separate classes within the same buildings as white American students. This pattern was the beginning of the segregated education of Latinos in the U.S., which has continued in some form
to the present (MacDonald 2004). “Mexican schools” were justified on educational rather than racial grounds. Typically, administrators claimed that Mexican children should not be educated with American students because 1) they did not speak English well enough; 2) they did not attend school until the end of the fall harvest season; and, 3) they were not prepared for school to the same degree as white students (MacDonald 2004, Sanchez 1997; San Miguel Jr. 1997). Conditions in Mexican schools varied widely in terms of the language abilities of the instructors and the facilities available to the students; yet, in most cases the conditions available to Mexican students were well below the standards of the white schools.

One of the major differences between the experiences of African Americans on the Eastern seaboard and Latinos in the Southwest was that Latinos were not typically marked as a racial or ethnic group in state constitutions. Thus, there were few legal avenues for discrimination against them. However, it is well documented that the standing of Latinos in the southwest during latter half of the 19th Century was that of second class citizens often through de facto means. It should be noted again that conditions varied by locality, language origin and skin color. For instance, many Mexican Americans that appeared European and had a grasp of the English language could live easily in white society, whereas darker, Spanish speaking Mexicans faced crippling discrimination. Further, it is interesting to note that the justification of inferior education for Latinos because of language has been a consistent feature of Latino education throughout American history (Sanchez 1997, MacDonald 2004).

Mexican Americans that faced discrimination and inequality during the Americanization phase resisted this treatment. For many Mexican Americans, mutual aid societies (mutualistas) were a key aspect of resistance and community. Others took a more militant stance toward the Americans, for instance, Las Gorras Blancos (the white caps) was a subversive group of Mexican Americans that resisted land acquisitions throughout Nevada and Arizona by destroying barbed
wire fences and staging dramatic non-violent protests. Additionally, the educated former Mexican elite class organized politically in order to fight discriminatory policies and practices enacted by their new governments.

Additionally, because the federal government prohibited new states from importing slaves, many new Southwestern states were dependent on Mexican workers for economic expansion. Indeed, some have linked the willingness of school administrators to let Mexican children skip school in the early fall months to the reliance of the economy of the labor of these children (Sanchez 1997). This similarity is another critical link between the educational experiences of Black and Latino Americans throughout history; namely that the educational opportunities for members of these groups consistently took a back seat to the economic needs of society.

*The Ideology of Scientific Racism*

The unfair treatment of African American and Latinos in the 18th and 19th centuries was based on an ideology of race and racism that holds that individuals with different physical characteristics comprise discreet racial groups that differ in their inherent abilities, attitudes, skills and value (DuBois 1986; Omi and Winant 1994). Winant (2000:172) argues that race was one of many theoretical justifications for exclusion of certain groups and took over where religious, familial and nation based forms of exclusion left off. For instance, before the ideology of race became a part of social life, social distinctions between people were often based on distinctions such as the Catholic/Tribal distinction seen in the Southwestern United States. However, in the 18th and 19th centuries, fueled by advances in the life sciences and the influence of science on popular discourse, the ideology of race would provide a strong justification for the continued exclusion of racial minorities from the mainstream institutions of American life.
Before the 18th century the term race had widely varied meanings, but most often referred to a general class of people (i.e., a race of ironworkers) (Banton and Harwood 1975; Outlaw 1990). The first biological works on racial classification of humans appeared in the late 1700s and typically used a three category hierarchy (Caucasian, Negro, and Asian) to classify the entire human family. Central to these early biological treatments on race was the idea that not only could humans be classified into pure races based on physical characteristics, but also that race was an explanatory tool that could explain the differences in circumstance between white and minority individuals. These differences were thought to be a function of nature, rather than as a result of socio-historical processes. Many scientists at this time were eager to document the differences in physical characteristics between racial groups to provide empirical scientific evidence for a racial understanding of human variation. For instance, in 1848, biologist Charles Hamilton Smith noted that “the negroes lowly place in the human order was a consequence of the small volume of his brain” (Smith 1848; cited in Outlaw 1990). This type of scientific racism would dominate understandings of race in the United States into the early 20th century. Further, even as scientific racism became anachronistic it left an enduring mark on society as race had became an “obvious” part of both social and biological reality.

The exclusionary practices of white Americans at this time cannot be said to be only a result of the ideology of scientific racism. Rather, the ideology of race that takes hold in particular social situations is often the ideology that is best suited to the economic needs of the dominant groups. Racial classifications are a tool, and as such, individuals will pick the tool that best suits their purposes (Banton and Harwood 1975; Outlaw 1990). Thus, the causal ordering of ideology and practice is murky at best. The understanding of racial ideology as a tool is also useful for understanding that within any era, there are varied racial ideologies among groups of people.
The end of reconstruction in the Southern U.S. brought about the advent of the Jim Crow era where southern Blacks saw most of the rights they had gained during reconstruction stripped and a hardening of white supremacy by mob violence, draconian laws, and key legal decisions.

For instance, in 1883, The U.S. Supreme Court ruled on what are referred to as the Civil Rights Cases (1883). These were a group of 5 cases that challenged the constitutionality of Jim Crow laws based on the 14th amendment and Civil rights bills of 1866 and 1875. The court ruled on these cases in one decision which essentially nullified the Civil Rights legislation passed during reconstruction. Specifically, the court ruled that under the 14th amendment Congress did not have the authority to outlaw private discrimination by individual people or corporations, but could only outlaw discrimination done by public (i.e., government) agencies. This case was a harbinger of more unraveling of the legal gains made under reconstruction.

In 1893 a 1/8th Black man named Homer Plessey boarded a train car in Louisiana in intentional violation of the Jim Crow laws that had been passed since 1877. In the ensuring litigation the Supreme Court again affirmed that states had the right to segregate facilities under the Constitution and that segregation did not imply worse conditions for the minority parties. Summarizing the decision, Justice Billings Brown declared, "We consider the underlying fallacy of the plaintiff's argument to consist in the assumption that the enforced separation of the two races stamps the colored race with a badge of inferiority. If this be so, it is not by reason of anything found in the act, but solely because the colored race chooses to put that construction upon it" (Plessy v. Ferguson 1896: 543–44). This decision affirmed a ‘separate but equal’ doctrine as the legal framework of white supremacy well into the next century.

Although emancipation and the reconstruction era were undeniably beneficial to the status of the African Americans in the United States, the gains made were minimal and not
widespread. Again it is important to note that the experiences of African Americans varied significantly during this period by region, color and former slave status. For instance, among the estimated 9,000,000 Black Americans in 1900, about 45% of the adults were illiterate; a rate about 7 times that of whites. Further, in 1900 only about 20% of Black children were enrolled in a school, during an era where full enrollment in elementary schools was becoming standard among white Americans (U.S. Census Bureau 1900). However, the regression of American society back to total domination of Black Americans was met with continued resistance. As some Black Americans became educated in both Black Universities and Mixed Institutions they also began to organize politically and by 1919 the NAACP was founded.

In the Southwest, Latinos were also resisting their continued oppression. In 1929, The League of United Latin American Citizens (LULAC) was formed which had among one of its main goals the desegregation of education for Latino children in the southwest. Both LULAC and the NAACP would continue to fight segregation in education and other public accommodations throughout the early and mid 1900s. Because there is no national policy specifically concerned with educational access, the main strategy these groups used were continued lawsuits challenging the constitutionality of local policies. This strategy often resulted in narrow rulings in favor of desegregation. Yet, as narrow rulings accumulated, the desegregation movement succeeded in changing the national political landscape regarding segregated education.

In a landmark ruling for Latino children, The Ninth Circuit Court of Appeals ruled in *Mendez v. Westminster* (1946) that California law did not allow for the segregation of Latino students in public education. This case was a major victory for Latinos in California; however,

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1 While the early Census data is appropriate for within year comparisons, it is not advisable to compare these figures to other Census years as data collection methods, accuracy and definitions of illiteracy were not constant across years.
the ruling was quite narrow. The court ruled that because California law only specifically defined that Chinese, Japanese and Mongolian should be segregated in public facilities, the segregation of Latinos was illegal in California. Again, it should be noted that in contrast to African Americans, Latinos were not typically designated as a distinct racial/ethnic group in U.S. or state law. Although a limited gain, the decision was a key first step in the unraveling of the separate but equal doctrine.

The NAACP won an initial victory in 1950 in the case *Sweatt v Painter* (1950). This case centered on Herman Sweatt a Black man who was denied entry into the University Texas Law School because Texas law disallowed integrated education. The Supreme Court would eventually rule that any segregated Black only law school could not be equal to the established law school in Texas and demanded that Sweatt be allowed to enter that institution and that in graduate education intangibles (such as the ability to meet future attorneys) must be considered when determining what was equal.

Another victory won by the NAACP in 1950 was in *McLaurin v. Oklahoma* (1950). In this case, the plaintiff George McLaurin had successfully sued and been allowed entry into graduate school at the University of Oklahoma again because no separate facility existed. However, McLaurin was forced to use segregated facilities such as a special desk in the library, a particular table in the cafeteria, and a desk just outside of the classroom during lecture. The Supreme Court ruled that McLaurin’s 14th amendment rights were being encroached upon, and that public institutions of higher education could not treat admitted students differently based solely on their racial backgrounds.
Early Sociological Treatments of Race

By the late 1940s social scientific understandings of race had begun displace the biological sciences of their influence on popular discourse. Rather than the scientific racism of the 18th and 19th century, early 20th century understandings of race were influenced heavily by European immigration to the United States, and given their social scientific origins, placed more emphasis on socio-cultural differences than physical ones. Spurred by the nationalist rhetoric that justified American action in World Wars I and II, it was at this time that social scientists such as Myrdal (1943) began to articulate the “American dilemma” of standing for values of equality and democracy, while relegating racial minorities to second class status.

Early sociological treatments of race viewed “the race-relations problem” through an ethnicity paradigm. The most influential forms of the ethnicity paradigm, as developed by Chicago School sociologists, were premised on three main assumptions. First, the ethnicity paradigm suggested that the experience of underprivileged racial minorities (e.g., Blacks and Latinos) would follow the same patterns as the white ethnic groups that came from Southern and Eastern Europe (Myrdal 1943; Park 1950; Allport 1954; Gordon 1964; Williams 1975). For instance, Park (1950) argued that the race-relations cycle, which consisted of contact, competition, accommodation and assimilation, was inevitable and irreversible. Additionally, Gordon (1964) described a singular assimilation process, consisting of seven dimensions. The end result of this assimilation process was “structural assimilation” in which members of minority groups were integrated fully into the mainstream economic and social institutions of white society. Gordon suggests that this paradigm, which explained the eventual inclusion of white ethnic groups into the mainstream, would also describe how racial minorities would eventually become assimilated into American society.
Second, the ethnicity paradigm suggested that the primary cause of the race-relations problem was individual discriminators holding onto irrational, prejudiced beliefs (Allport 1954). That is, according to this discourse the race problem was caused less by a history of mistreatment of racial minorities and more by the prejudiced beliefs of contemporary Americans. Essentially, this paradigm suggested that if the prejudicial beliefs that underpin racism would vanish, then the ‘race-relations’ problem would vanish in turn. The understanding of the race problem as being primarily a function of prejudiced whites is one of the most lasting legacies of these early social scientific understandings of race.

Third, these arguments were premised on a general functionalist view of history which saw modern societies as progressing from a more primitive past, and held that the racial and ethnic antagonism seen in the United States was a primordial aspect of societies throughout time (McKee 1993). Taken together, these assumptions suggested that racial prejudice and thus the racial relations problem would dissipate as society progressed and Blacks and Latinos were integrated into contemporary American society. The problems with the ethnicity paradigm were pointed out by Cox (1948), who argued that this perspective could not explicitly link racial oppression to features of modern capitalist societies precisely because the paradigms viewed racism and discrimination as vestiges of the past and denied their roots in modern capitalist societies. Cox (1948) was one of few scholars at the time that suggested that the American experience of racial life could not be understood without reference to the historic specificity of the American experience, heavily influenced by slavery, rapid economic expansion, and capitalism.
By the early 1950s the desegregation movement was encouraged by the narrow victories won in the courts, and in 1954 a Supreme Court ruling finally overturned the separate by equal doctrine that had been established in the late 19th century. In *Brown v. Board of Education of Topeka Kansas* (1954), a group of 13 Black parents had sued the school district and claimed again that segregated educational system in Topeka was unconstitutional under the 14th amendment. The court effectively overturned the rulings of *The Civil Rights* cases and *Plessey v. Ferguson* by deciding that segregated facilities were in fact unequal and the de jure segregation in public accommodations was unconstitutional under the 14th amendment.

The Brown decision was a landmark victory for Black Americans in re-securing a constitutional guarantee for equal rights. Yet, there are some caveats that are less well known about the Brown decision. First, at the time of the Brown decision 16 states in the U.S. prohibited racial segregation and some Black students were able to secure education either in integrated schools in the North or in Black colleges and universities in the South. Yet, although there was great variability in the experiences of individuals; as a group, Black Americans were not attaining education at similar rates to their white counterparts (U.S. Census Bureau 1960). Additionally, even after *Brown*, educational opportunity was an aspect of American life that Black Americans had to struggle to attain. Indeed, hundreds of school districts across the United States would end up in legal battle to determine the legality of their specific integration plans.

The *Brown* decision was not popular in all segments of American society. The decision most affected the South as many Northern states had laws against legal segregation. White Southerners were upset at the idea of federal courts forcing integration on them and many were determined to resist the implications of the law. As a result of this recalcitrance, many districts in the South had to be forced by court order to integrate their schools. Further, the Supreme Court
had not made clear what would constitute integrated schools or when exactly districts needed to integrate in order to comply with the new interpretation of law. This vagueness led to a situation that was ripe for litigation and court battles.

An infamous chapter in American history illustrates the difficulties that local communities had implementing integration plans in schools. In 1957, nine Black students enrolled at the all-white Little Rock Central High in Little Rock Arkansas. The School Board in Little Rock had decided that they must allow these students to enter the school to comply with the Brown decision. However, a group of segregationists protested this ruling and Arkansas State Troopers were ordered to block the nine Black students from entering. This standoff led to some of the most memorable and dramatic images during the Civil Rights movement, as President Dwight Eisenhower nationalized the State Troopers and ordered the students to be escorted by soldiers into the high school.

The story of the Little Rock Nine shows the struggles that were required for Black Americans to secure educational opportunities. In this instance, nine federal lawsuits and eventually intervention by the U.S army was needed to give just nine Black students the opportunity to attend a school with some 2,000 white students. Indeed, the events surrounding the integration of Little Rock schools has lead some to be critical of the NAACP’s strategy of integration at all costs during the late 1950s. These scholars argue that in hindsight the movement may have had most success if they had focused on equality rather than integration (Bell 2004).

The events in Little Rock were part of the larger Civil Rights movement in the U.S. that took place throughout the late 1950s and early 1960s. The civil rights movement culminated in the 1964 Civil Rights Act which reaffirmed most of the rights that had been granted to Blacks during reconstruction and then stripped away during the Jim Crow era. Throughout the 1960s,
the NAACP continued to secure victories in the federal Courts and by 1971 the court would rule that there was a compelling interest for school districts to act against de facto as well as de jure segregation.

In *Swann v. Charlotte Mecklenburg* (1971) the school district in Charlotte, NC was sued on behalf of six-year old James Swann. In this case, the Charlotte schools had attempted to comply with *Brown* with a neighborhood school plan that ceased official segregation. However, due to residential patterns, the school plan had little effect on the racial composition of the schools. The Supreme Court would order the Charlotte-Mecklenburg school district to bus students, sometimes miles from their homes, in order to obtain racially integrated schools and ensure equal educational opportunities for all students. In the ruling the court held that:

> ...where it is possible to identify a "white school" or a "Negro school" simply by reference to the racial composition of teachers and staff, the quality of school buildings and equipment, or the organization of sports activities, a prima facie case of violation of substantive constitutional rights under the Equal Protection Clause is shown (*Swann v. Charlotte- Mecklenburg* 1971: III).

thus ending the legal justification for de facto segregation in American schools.

The *Swann* case had a similar effect as *Brown* again leading hundreds of local districts to become engaged in litigation to sort out or order desegregation plans, this time the ruling applied not just to the South, but also to Northern states which had long outlawed de jure racial segregation, but still had effectively segregated educational systems. In many of these districts there were already lawsuits pending, in essence waiting for the Supreme Court to weigh in on de facto segregation.

Throughout the 1970s and 1980s the fight over school segregation became the fight over busing as districts all over the United States began bussing students to integrate schools. For instance, violent scenes reminiscent of Little Rock Arkansas were observed when a bussing program was implemented in Boston in 1974. Despite these difficulties desegregating schools,
progress was made throughout the 1980s. The South, the area with the largest Black population, became the most integrated region of the country (Orfield and Yun 1999). For instance, the proportion of Black students that attended majority white schools reached its peak of 43.5% in 1988, up from an estimated .1% in 1960 (Orfield and Yun 1999). Some commentators have suggested that the statistical parity reached by African Americans in some educational areas (e.g., high school graduation rates) occurred as a result of court ordered desegregation plans which were in place throughout the 1980s (Reid 1982). However, re-segregation would begin in the early 1990s and continues through the present day.

**Contemporary Understandings of Race**

To understand the re-segregation of schools in the 1990s and 2000s, it is instructive to first review some contemporary understandings of race and ethnicity. In contrast to the trends of scientific racism or the ethnicity paradigm described above, contemporary explanations of race/ethnicity have had less of an influence on producing popular understandings of race, but rather, have been more a force in describing popular understandings of race. Specifically, scholars in the 1990s and forward have described how a ‘color-blind’ ideology of race has contributed to the rolling back of much of the proactive legislative and judicial actions of the civil rights era.

Recall that according to the ethnicity paradigm, the problem of racism was a problem of prejudiced individuals discriminating against racial minorities. In the 1970s, spurred by leftist political movements in the United States and abroad, critical scholars began to expand this understanding of racism to include macro-level considerations. For instance, Carmichael and Hamilton (1967) argued that in the United States institutional racism was an important aspect of political life. Institutional racism describes how putatively neutral social policies disadvantage
racial minorities due to the history of discrimination and the cumulative disadvantage that this history produced. Examples of institutional racism include the functioning of the banking, criminal justice, and educational systems in the United States. Each of these social institutions is structured in a way such that treating individuals in an ahistorical ‘race-neutral’ fashion inevitably leads to the reproduction of racial inequality.

In another macro-level analysis of racism, Blauner (1972) argued that the status of African Americans in the United States was similar to that of colonized peoples in the third world. Blauner argued that an internal colonialism paradigm was a useful heuristic for understanding racial life in the United States. Using the internal colonialism paradigm Blauner described how segregated Black communities in the United States lacked political and economic autonomy and were exploited by mainstream white society. Blauner also noted the similarities between Black power movements in the United States with anti-colonial movements in third world nations sharing an Afro-centric aesthetic, demands for local autonomy of minority communities, and an unapologetic assertion of their human and civil rights.

Additionally, contemporary understandings of race have been influenced by more recent work in biology and genetics which suggest that the biological basis for racial classifications of human bodies is arbitrary and useless. This knowledge has lead most scholars to conclude that racial categorization is a social construction rather than a biological reality. The idea of a social construction refers to when humans produce an arbitrary classification scheme to understand the physical world. The definition of race as a social construction implies that 1) racial classification of individuals is precarious and 2) racial classifications are likely to vary by time and location.

Further, critical scholars of race/ethnicity have argued that, given the political implications of human classification, race can be best understood as an ideology, in that it is a belief system with political and economic consequences. For instance, Winant (2000: 172)
suggests that the concept of race is one of the most pernicious and persistent concepts that
“signifies and symbolizes sociopolitical conflicts and interests in reference to different types of
human bodies.”

Defining race as a socially constructed ideology does not suggest that this concept is only an ideational component of society, which would disappear if people stopped thinking about it. Rather, central to understandings of race as an ideology is the understanding that the ideological concept of race is grounded in and used to justify exclusionary practices against those defined as racial minorities (Bonilla-Silva 1996; 1999). As Bonilla-Silva (1996) points out, once racial categories take on social meanings and become organizing principles of social organization, these categories have relevance for the life chances of all individuals in a society. In Bonilla-Silva’s (1996: 469) words, racial categorizations give rise to racialized social systems in which “economic, political, social and ideological levels are partially structured by the placement of actors into racial categories or races.” Over time, as social practice grounded in racial oppression become routinized and institutionalized into society, individuals placed in different racial categories begin to “develop dissimilar objective interests…to either transform or maintain a particular racial order” (Bonilla-Silva 1996: 469, 470). These arguments have lead Mills (2003) to conclude that attempting to understand race in contemporary life without understanding the socio-political system of white supremacy is tantamount to attempting to understand economic life without reference to capitalism.

Contemporary understandings of racism differ from earlier understandings in at least three distinct ways. First, race is seen not only as an individual ascribed trait, but as an organizing principle of social life. Second, racism and discrimination are often built into routine, putatively neutral practices of social institutions. Third, racial discrimination is not seen as the result of pathological individuals, but as a normative component of social practices in modern
capitalist societies. Educational re-segregation is a prime example of color-blind ideology and practice, as it is premised on the idea that ignoring racial inequalities is the best way to overcome them.

*Resegregation in the 1980s and 1990s*

Throughout the 1970s and 1980s local communities had fought desegregation through various neighborhood school and school choice programs, even though these programs were consistently rejected as inconsistent with the law. Nevertheless, some narrow decisions began to erode the gains made in civil rights era. For instance in *Milliken v Bradley* (1974), multi-district integration plans were disallowed which paved the way for white flight from urban districts to suburban areas just a few miles away (Orfield et al.1996). In 1986, a significant decision against integrated schooling was made in *Riddick v. School Board* (1986), in which a more conservative court ruled that once a school system was defined as unitary, desegregation programs could be terminated and *de facto* segregation would not be unconstitutional. This decision was the first in a series of losses for proponents of segregation that would continue through 2007, in which the Supreme court ruled in a case involving the Seattle public schools that the 14th amendment protects white students from being forced to go to school with minorities and that race cannot be factor in assigning children to schools (*Parents Involved in Community Schools v. Seattle School Dist. No. 1* 2007).

Current data on the racial composition of public schools reflect both the trends of re-segregation throughout the late 20th and early 21st and the overall increase of Latinos in public school population. This situation means that whites are more exposed to minority students, but minority students are not largely exposed to whites. For instance, white students are more likely to be enrolled in a school with at least 5% minorities than in the 1980s or 1990s and there are
some 35% less ‘all white’ schools now than in 1994. However, about 3 in ten Latino and African American students attended schools that were less than 5% white, and the number of all minority schools has almost doubled since the mid 1990s (Fry 2007).

Overall, the history of race and education in the United States has been a history of segregation and disadvantage for Black and Latino students. I have shown that the fight for educational access has been a long and difficult one for each of these racial groups. For both African Americans and Latinos this fight has existed from the first establishment of public schools in the United States to the present day. In light of this history, the current disparities in achievement and attainment between these groups and white Americans are not surprising. Further, this historical overview shows that the analyses that follow are best put into the color-blind racism era of race relations in the United States in which race-neutral social policies assist in the perpetuation of racial inequality given that individual students are position differentially in social space based on their racial categorization.
CHAPTER III

LITERATURE REVIEW

This section provides an overview of theoretical and empirical work in the sociology of education most relevant for the current study. Sociologists have been investigating the correlates of educational attainment since the 1960s, determining that the most consistent correlates of educational outcomes other than race are family background factors (e.g., parents’ education), gender, social psychological and aspirational factors, and school characteristics. This section reviews empirical research and theoretical explanations for the associations of each of these groups of variables with educational outcomes with attention to how particular factors may affect students’ educational trajectories over the course of educational careers. Further, I examine how a conceptualization of educational careers may help answer key questions about the effects of factors linked to educational attainment. The chapter concludes by delineating eleven hypotheses investigated below.

Sociological Studies of Race and Educational Attainment

Given the history of racial inequality in the United States, research on race and education has rarely been concerned with simply documenting well known racial differences in educational attainment. Instead, research in the sociology of education has looked at what factors may explain racial disparities in education and how the process of educational attainment may differ for
individuals of different racial and ethnic backgrounds. Additionally, research has investigated how the social processes of educational attainment have changed over the past half century.

It is well known that general educational level of the U.S. population has increased significantly since the 1960’s and more individuals currently participate in education now than at any time in U.S. history (U.S Department of Education 2009). Given that white males were already obtaining relatively high levels of education by the middle of the century, more recent increases in educational attainment have been observed most among women and racial minority groups. These gains in attainment are also most apparent at lower levels of education. Currently high school graduation is very common with over 85% of all students gaining a diploma, and nearly half of all high school graduates attend some type of post secondary education. Government policies, such as student loan programs, explicitly support increasing enrollment in post-secondary education. For instance, in 1970, white students represented over 82% of all college students. By 2007, however, 64% of college undergraduates were white, 13% were Black and 11% were of Latino background (U.S. Department of Education 2009).

Early sociological work on racial disparities in educational attainment (Porter 1974; Kerckhoff 1974; Kerckhoff 1976; Wilson and Portes 1975; Portes and Wilson 1976; Kerckhoff and Campbell 1977) examined how the process of status attainment may operate differently for white and Black males in the United States. For instance, Kerckhoff and Campbell (1977) look at a status attainment model for Black and white make students and found differences in the process leading to educational attainment for Black and white students. Specifically, they find that measures of disciplinary problems in high school, along with measures of ambition explained more variation in Black students’ educational attainment. Findings from this and other studies led some authors to argue that the process of educational attainment among Black students follows a ‘sponsored mobility’ pattern in which certain individual students are groomed from a young age
to become successful and attain more education (Kerckhoff 1976, Porter 1974). Conversely, white youth attain education through a process of ‘contest mobility’ in which academic evaluations are of paramount importance. Sociologists at this time further argued that one crucial factor leading Black students to become “sponsored” was the degree to which students conformed to mainstream Anglo cultural patterns (Porter 1974). This early work thus suggests that the educational career paths for students of different racial backgrounds may take a fundamental different form (cf. Turner 1960 for more discussion of contest and sponsored mobility).

A more recent line of research looking specifically at the effect of minority status on college entry has consistently found a “net college advantage” in college entry among minority students. The net college advantage refers to a pattern in which Black, and to some degree, Latino students are more likely to enter post-secondary education after family background differences are accounted for (Alexander, Holupka and Pallas 1987; Bauman 1998, Hauser 1993, Kane and Spizman 1994, Rivkin 1995, Bennett and Xie 2003, Charles, Roscigno and Torres 2007; Bennet and Lutz 2009). For instance, Alexander, Holupka and Pallas (1987) investigate determinates of two year vs. four year college attendance among Black white and Latino students. These authors find that among college goers, Black students are modestly more likely to attend a four year college compared to white students. Additionally, these authors find the relationship between SES and college type to be weaker among Black students compared to white students. Indeed, many students have found a similar pattern of lower SES Black students being modestly more likely to enroll in college compared to middle SES white students (c.f. Bennet and Xie 2003). Bauman (1998) investigates possible causes of this pattern and considers affirmative action, gender, removal of educational barriers and labor market factors as possible causes of the net college advantage for Black students. His analyses however, do not find clear evidence for any one of these factors. Specifically, Bauman finds that the generally pattern of a net Black
advantage is evident in analyses of data from throughout the post WWII period making arguments that the pattern is caused by affirmative action admission policies suspect. Other analysts looking at similar types of explanations such as historically Black colleges and universities (HBCUs) and African immigrants have found that these factors cannot completely explain the net college advantage for Black students (Bennett and Xie 2003, Bennet and Lutz 2009). Common to most studies of the net college advantage are explanations which focus on factors specific to college enrollment as main causes of this pattern.

Other research which investigates differences in college enrollment patterns looks at how academic factors such as grades and standardized testing affect college entry. Blau, Moller and Jones (2004) find that among low test scorers, Black students are more likely to attend college. Yet, white students are more likely to enroll in college among high and medium test scorers. These authors argue that the reason for this pattern is that Black students do not put as much emphasis on academic evaluations when deciding whether to enter college compared to white students. Rather, these authors argue that the main factors for Black students are cultural orientations towards education such as the degree to which the student values education and their aspirations for further educational attainment. These authors find that controlling for educational aspirations reduces the net college advantage for Black students. One recent study (Charles, Roscigno, and Torres 2007) argues that the pattern of a net college advantage for Black and Latino students simply underscores the role of socioeconomic inequalities in producing racial disparities in educational attainment. They argue that racial differentials in economic prowess produce different trajectories of educational investments throughout student careers leading to differences in college attendance rates.

Fewer studies have looked at college enrollment among Latino students. The studies which have looked at Latinos have typically investigated the same family background and
socioeconomic factors that scholars have used to explain Black–white differentials with findings indeed showing that socioeconomic disparities are important in producing educational disparities (Ganderson and Santos 1995; Baker and Vélez 1996; Gonzalez and Hilmer 2006). However, scholars have also looked at how factors specific to immigrant groups such as language skills, social capital, and ties to the host country may affect the attainment of Latino students (Mora 1977; Ream 2003; Ahituv and Tienda 2004; Perreira Harris and Lee 2006 Johnson 2007). Perreira Harris and Lee (2006) look at how human and social capital factors affect the educational attainment of Latino, Asian and African immigrant youths. These authors find that differences in social human and cultural capital are each important factors in creating a pattern in which second generation students gain more education than their parents, yet third and fourth generation students begin to attain less education again. Other research on Latino education has found that Latino students are far more likely than their white counterparts to attend two year colleges than white and Black students with some research showing that two year college enrollment is indeed beneficial for the eventual educational attainment of Latino students (Gonzalez and Hilmer 2006).

Economists have also looked at the net college advantage pattern. Rivkin (1995) looks at the High School and Beyond Data and argues that discriminatory labor market factors make the opportunity costs of attending college smaller for Black students. With labor marker prospects lacking, Black students enter post-secondary education, however, these students do not translate post-secondary enrollment into better labor market outcomes. Thus, Rivkin argues that the net college advantage is a process that is disadvantageous for Black students, and argues that social policies should attempt to increase labor market prospects for minority youths rather than encouraging them to enter post-secondary education. Rivkin’s work is characteristic of work on this topic in the field of Economics, which typically argues that the net college advantage pattern is a result of government policies which are specifically designed to encourage minority
participation in post-secondary enrollment by alleviating the financial strain and credit issues associated with entry into college. Economists are somewhat skeptical about the merits of these efforts arguing that individuals encouraged by these types of policies may not be well suited to college success. Rather, economists argue that government policy efforts should be directed at the economic disparities which lead to differences in college preparation between racial groups (cf. Cameron and Heckman 2001, Long 2007).

Researchers investigating the net college advantage have revealed interesting patterns regarding race and educational attainment in the United States. This dissertation adds to this literature by looking at the effects of race over educational careers of students. Particularly important in this regard is how race affects transitions over time and how the effects of race change when other variables are controlled for. As noted, most explanations of the net college advantage look at factors specific to college entry to explain this advantage. However, it is not known if the net college advantage is the end result of a cumulative process that begins early in student careers. If this pattern is the result of a process beginning early in student careers, scholars may need to rethink our understanding of the pattern. Additionally, some authors have argued that cultural factors often omitted in studies of the net college advantage may explain the net college advantage because these factors may be important for minority students who are skeptical of educational assessments. In analyses pursued below, I investigate whether there are racial differences in educational transitions after controlling for social psychological and aspirational variables. Additionally, I investigate how the effects of aspirational and social psychological variables may vary across racial groups to assist in clarifying the role these factors play in patterns of college enrollment by race.

The bulk of research on racial disparities in educational attainment is most concerned with how other factors known to affect educational attainment play into racial disparities.
Consistently with the broader sociological literature on education, most of these studies look at the role of family background factors which also are the central focus of the major theoretical contributions in this area. Other factors investigated are gender, attitudinal factors and school characteristics.

*The Role of Family Background*

Family background effects on educational attainment have long been a central focus of the sociology of education. Early treatments of education in sociology conceived of education as an essential component of the socialization aspect of functional integration. In the post WWII era, the central question within the sociology of education became the link between education and social inequality. Scholars at this time began to link the social organization of education in society with the distribution of social statuses. Specifically, these studies were concerned with the link between family background, educational attainment and adult social status. Given the centrality of family background differences to sociological studies of education, these issues also are fundamental to the most general theories of educational stratification.

James Coleman’s 1966 study, titled *The Equality of Educational Opportunity* (EEOC) was a federally funded investigation of the disparities in resources in public and catholic schools across the United States. The study was a massive endeavor, mandated by the 1964 Civil Rights Act, which collected data on some 650,000 students in some 3,000 schools across the United States. While exact meaning and validity of the findings of this study are still debated in the field today, the influence of this study on the sociology of education and educational policy in the U.S. cannot be disregarded.

The Coleman report highlighted the importance of family background characteristics in determining academic achievement and explaining the racial gap in achievement. This finding
supported the popular idea that a crisis within Black families was responsible for many of the
difficulties associated with ‘the race problem’ (cf. Moynihan 1965). The general statement of
EEOC was that the cumulative history of inequality for minorities had created a situation in
which these students did not perform as well as their white counterparts, but these differences
were not due to any facets of the educational system per se.

Another highly influential study in the sociology of education was the Jencks et al.
(1972) book, *Inequality* -- a book which attempted to merge together the evidence in both Blau
and Duncan’s (1962) well known work on status attainment and Coleman’s (1966) report. The
result was an ambitious analysis of the role of family background, cognitive skill, school quality,
educational attainment, on the outcomes of occupational status and annual income. By
examining data on the determinates of social status in the U.S., and including measures of almost
all the factors identified by other researchers, these authors critically engaged the notion of
equality of opportunity and its likely effects on the distribution of incomes.

In essence, the authors of *Inequality* argued that the low variance explained estimate for
adult social statuses that they found (about 23% for income and 44% for occupational prestige)
indicated that the process of status attainment in the United States was more random and less
structured than was commonly believed at the time. That is, these authors argued that the process
of status attainment is random to a large degree, because the factors of family background,
educational attainment and the like could not predict adult statuses with very much accuracy.
However, the authors are clear that among those variables that did have a significant effect on
earnings, education was not only one of the strongest predictors in their model, it was one of the
few predictors that could, at least in part, be thought of as achieved by individual students.

The methodology of *Inequality* and its main findings were extensively criticized when the
book was first published. While much of this criticism raised valid methodological questions
about the study, some of it reads as an apology for functionalism and a refusal on the part of some to believe that American society was not as meritocratic as functionalist assertions suggested (cf. Taylor 1973). Of particular concern for functionalist scholars was the idea that society may not be filling its most important positions with the most qualified individuals, which was an implicit underpinning of functionalist analysis of status attainment (cf. Davis and Moore 1945).

**Critical Perspectives on Family Background Effects**

By the mid 1970s, critically oriented sociologists, influenced by both economic and cultural Marxism began to formulate responses to the mainstream sociology of education and social mobility literature in the United States. Past sociological models of the educational system had focused mainly on how the social organization of the educational system affects the experiences of individuals within this system and in society. Alternatively, critical models expanded the purview of the sociology of education and began to look at how the organization of society also affects the educational system as a whole. That is, scholars working under functionalist premises did not see the relationship of education to society as a whole as an empirical question, as it was assumed that the educational system was a fundamental aspect of societies that aligned the personalities of individuals with the social system, leading to an integrated society. Conversely, scholars working from a critical perspective questioned this process and how it may benefit particular social groups at the expense of other. These critical studies of status attainment were spurred by the findings such as those of Jenks et al. (1972) which suggested that the process of status attainment did not follow orderly functionalist proscriptions. However, these scholars took a different approach in interpreting statistical associations between family background characteristics and academic outcomes.
Starting with more structural predilections, critical scholars focused less on the individual and cultural attributes of students, but instead focused more the social organization of the educational system (i.e., social structure). For the purposes of discussion, social structure refers to policies, practices and procedures of educational institutions, as well as patterned social relationships within these institutions. Often these critical models are termed social reproduction models because they posit that the educational system serves as the main engine of social reproduction in a class society. As a part of social reproduction, some individuals are sorted into high status positions and others are sorted into lower status positions (e.g., Boudon 1974; Bourdieu and Passeron 1976; Bowles and Gintis 1977; Willis 1977; MacLeod 1985, Lareau 2002, 2003).

Critical scholars argue that most educational thinkers begin with a premise that the educational institutions in a society can equalize the playing field for all members of a society. This pattern of logic mistakenly places the educational system at the center of an ideology of ‘equality of opportunity’ (Bowles and Gintis 1976; Bourdieu and Passeron 1977). However, as these scholars point out, the education system has never played this role in capitalist societies; as Bowles and Gintis state (1976: 103), “…beneath the facade of meritocracy lies the reality of an educational system geared toward the reproduction of economic relations…” Although Jencks et al (1972) had made a similar discovery in their own work on this issue their underlying interpretations differ markedly. Critical scholars proffer that the education system (at least in its current form) cannot play a major role in reducing social inequalities because it is not organized around this goal. Instead, this system is subservient to, and designed to suit the needs of, the capitalist economic structure of society. Consequently, their analyses consider the processes by which the educational system plays a key role in the reproduction and legitimation of social inequalities necessary for the maintenance of a capitalist economic system. Bourdieu and
Passeron (1977: 11-12, 60, 126) argue that even if the educational system does have some degree of “relative autonomy” from capitalism, “the freedom granted to the educational system is the best guarantee that it will serve the perpetuation of the relations prevailing between the classes” (Bourdieu and Passeron 1977: 126).

Additionally, critical perspectives do not suggest that students check their ascribed statuses (e.g., race, class, gender) at the door of the school building, but that social positioning by status in the school system is analogous to social positioning in social space more generally. Put simply, these authors argue that much like the economic system, the education system positions individuals differently based on their social class, race and gender. Bourdieu and Passeron (1976: 101) are especially strong on this point, arguing that scholars need to keep in mind that individual children do not become *students* except in relation to the educational system. Therefore, scholars should not study “separately the school population and the organization of the institution…as if it were dealing with two substantial realities whose characteristics pre-existed their interrelation.” This line of thinking points attention to the role of the educational system in the creation of poor students and differs from arguments that imply that schools do as well as they can with the students with whom they work. Arguments which make student inputs the primary cause of educational inequalities are central to explanations that absolve the educational system of any role in the creation of racial disparities in education (cf. Coleman 1966; Herrnstein and Murray 1994; Farkas 2002; Nielsen 2006).

Reproduction theories additionally argue that the educational system serves a legitimation function in society. For example, in modern capitalist nations where an individualist philosophy and equality under the law are essential components of the political ideologies, the education system serves to reproduce social inequalities in a more subtle way compared to past systems based on family and kinship. As Bowles and Gintis (1976: 103) argue, “The education system
legitimizes economic inequality by providing an open, objective and ostensibly meritocratic mechanism for assigning individuals to unequal economic positions.” High-stakes examinations and standardized tests are two key practices within the educational institution that legitimate the exclusion of some students. Bourdieu and Passeron (1977: 162) suggest that high stakes graduate examinations “operate as an overt selection procedure” which “conceals the elimination which takes place without examination.” It should be emphasized that the efficacy of exclusionary practices is directly related to the perception that they are neutral standards that measure some future potential. In these ways, the putatively neutral status of the educational system, in which it is seen as rewarding only relevant skills and potential, is one of the key ideological components that legitimates social inequality in a the capitalist mode of production.

One additional component of social background identified by critical scholars comes from the notion that students are rewarded not only for their ability to master academic curriculum, but also their mastery of nonacademic cultural forms which vary by social background. These aspects are referred to as cultural capital (Bourdieu and Passeron 1976; Lareau 2002; 2003), the hidden curriculum (Anyon 1980), or styles of self presentation (Bowles and Gintis 1976) depending on the specific scholar. Although the exact specification of these concepts differs, each refers to particular styles, attitudes, tastes and preferences rewarded by the educational system. Bourdieu and Passeron (1976:115) maintain that in the French case, this phenomenon is most often manifest by fluency in the “university French” patios, rather than speaking “common parlance.” They further note that advanced courses are often premised on the ability to communicate in the distinct parlance, which serves as another ‘ostensibly neutral’ exclusion mechanism of the educational system. While measurement of these concepts is difficult, there is a large body of both qualitative and quantitative research which demonstrates that measures of cultural and academic resources in the home are influential in determining

Bourdieu and Passeron (1977) caution against static empirical models of family background characteristics on educational attainment. These authors argue that because the processes of selection and exclusion may vary at different transition points (e.g., primary to secondary; secondary to post-secondary) the effects of ascriptive status on educational outcomes may be ‘retranslated’ in different ways and thus may be obscured. They argue that these types of analysis lead to the illusion that the effects of ascription may wither away as students age, which is a common finding in the educational transitions tradition. In reality, these effects may have been “retranslated” and may work through different mechanisms at each stage of student educational careers (Bourdieu and Passeron 1977: 87).

Further, Bourdieu and Passeron (1977) contend that studies of the educational system which consider different stages of individual educational careers should be cognizant that they only analyze they population of school survivors. That is, these authors argue that the survivors in the education system are not the proper population in which to test the effects of social status on educational outcomes, but rather an entire population of both surviving and discarded students is necessary to tease out how social forces can affect student's success. For example, simply comparing racial groups on a particular college entrance exam may be misleading because a lower proportion of disadvantaged students sit for these exams (U.S. Department of Education 2007b). Non test takers may have dropped out of the educational system prior to the exam, and would be considered from the some perspectives to be ‘not motivated’ enough to finish the schooling necessary to break the cycle of social inequalities. This illustration is one example of
how viewing the education system from a sociological perspective as a dynamic system of selection and exclusion can lead to different interpretations of empirical trends. While other perspectives argue that hierarchy in the economic structures of society belie the ability of the educational system to equalize outcomes, critical scholars argue that the educational system abets the process of hierarchy – that is, social inequality is reproduced with the assistance of the educational system, not in spite of it.

Education Transitions Research

One broad area of family background research on education which has viewed the educational system in terms of educational careers and dealt with the selection issues is research influenced by the educational transitions (ET) model (Mare 1980; Mare 1993, Entswisle and Alexander 1993; Raftery and Hout 1993; Dauber, Alexander and Entswisle 1996; Aschaffenburg and Maas 1997; Breen and Jonsson 2000; Lucas 1999, 2001; Gamoran 2001, Pallis 2003; Mastekaasan 2005; Godsky and Jones 2007; Hansen 2007). The ET model began with Mare’s (1980) influential work in which he drew from Boudon (1977) and reconceptualized the most distal outcome in student’s educational careers as the end result of a series of decisions that each student makes about whether to continue schooling. Mare (1981) argues that regression estimates of the effects of background variables on total years of schooling are poor measures of the true effect of social background on educational attainment because these effects are averages of the effect of social background on a series of transitions made across an educational career.

Mare (1981) presented one of the first ET models, and found that that the effects of social background characteristics generally diminish at later stages of the educational careers of individual students, that is, the effect of social background variables is often the strongest among young students and declines as students move through the educational system. Mare (1980)
interpreted the finding as an artifact of selectivity at various levels of schooling. The degree of selection for lower-class students leads to a higher percentage of exclusion compared to upper-class students; therefore, disentangling the effects of class on educational attainment becomes murky at best at higher levels of schooling, and idea suggested by Bourdieu and Passeron (1977). However, Mare’s (1993) later work was less strong on this point and suggested that the pattern of declining background effects is not a defining feature of education, but an assumption that should be tested empirically.

The issue of selectivity is a problem and cause for debate in the educational transitions literature because the fact that different populations of students “survive” each transition can cause ‘unobserved heterogeneity’ among survivors. That is, these students may share some unmeasured characteristic which is the true cause of their eventual educational destination (Mare 1993; Cameron and Heckman 1998). Cameron and Heckman (1998) for instance argue that Mare’s (1981) model is fundamentally flawed because he has not controlled for this unobserved heterogeneity (which they contend is ‘ability’). The contention is that the increasing correlation between unmeasured ability and successive transitions which is captured in the error term in these models is driving the empirical pattern. According to Cameron and Heckman (as well as other econometrically minded investigators) ability differences are particularly pernicious in this regard because students base their educational decisions in part on their perceived likelihood of success, which is influenced by their academic ability.

Despite these criticisms, the finding that social background effects decline across successive school transitions has been replicated cross-nationally and has encouraged a large body of research over the past 20 years in which various explanations for this pattern have been proffered (Shavit and Blossfeld 1993). These theoretical and empirical explorations have sought to why educational expansion has not lead to more equality in education, and why rational actor
models of subjects (i.e., parents and students) have failed to close the racial and ethnic gap in education (c.f. Pallis 2003; Mastekaasa 2005; Grodsky and Jones 2007; Hansen 2007). Typically, the models suggest that continued educational inequality between social groups can be explained as the cumulative sum of the rational decisions of individual students.

For instance, the Maximally Maintained Inequality (MMI) perspective holds that privileged social groups guard their advantaged positions until these positions become normative in society (Raftery and Hout 1993). Then, privileged groups seize a new position of privilege. This process is one in which all social groups synchronously rise or fall in status, but the relative positioning among them remains stable (Raferty and Hout 1993a, 1993b; Gamoran 2001). For instance, this perspective argues that in the past advantaged students gained a high school education and those from less advantaged backgrounds would leave school at grade 8. However, as high school diplomas became normative in the United States, a college degree became the standard for advantaged students.

The MMI perspective is somewhat less germane to the current investigation because its main tenets refer to the relationship between the effects of social background on education and macro-social conditions in a society (e.g., overall levels of education, economic inequality, and educational structure) and take for granted the relationship between social background and school transitions. However, the MMI explanation for this phenomenon at the individual level is instructive with respect to rational choice models of educational stratification. This perspective contends that individual students make a cost–benefit based decision on whether to pursue a successive level of schooling. This cost-benefit analysis of the student is based on a subjective determination of the potential benefits of more schooling weighed against the risks of attending school (e.g., the risk of forfeited income, the risk of not finishing). The perspective argues that
when the perceived risk of schooling outweighs the benefit, individuals decide to forgo the next transition.

Various mechanisms by which rational actors decide when to leave schooling and the various determinants of this decision have been proposed (Morgan 1989, Grodsky and Jones 2007). Morgan (1989, 1998) and Grodsky and Jones (2007) have argued students from lower status backgrounds are likely to have less reliable or accurate information on the costs and benefits of college, making them likely not to invest in education in order to enhance their future status. Alternately, Goldthorpe and Breen have proposed a model of Relative Risk Aversion (RRA) which posits that student mostly attempt to avoid downward mobility, but do not distinguish between upward mobility or status maintenance. That is, they argue that the marginal utility of education begins to decline after the student reaches a threshold that is determined by their social class origins (Goldthorpe 1996; Breen and Goldthorpe 1997; Breen, 2001). There is continued debate in the literature about the proper conceptualization of educational decision and the proper statistical model used to test it (Breen and Jonsson 2000; Hauser and Andrews 2006; Mare 2006).

In another elaboration of the MMI perspective, Lucas (2001) makes two significant contributions to the literature. First, he argues that the model should be expanded to both the idea that students do not simply make yes/no decisions about whether to stay in the educational system, but rather students make complex decisions about the type and quality of education to which they will aspire. Student decide not only whether to stay in school, but also make decisions about what academic track they will take, what college they will go to and what type of degree they will attempt to obtain. Additionally, he contends that adding some time varying covariates to the basic ET model can aid researchers in controlling for unobserved heterogeneity of surviving student populations. Lucas uses the previous year’s grades as a predictor of each
transition, arguing that these indicators can serve as a proxy for ability differences which affect educational continuation decisions.

Lucas (2001) demonstrates that the inclusion of qualitative differences in type of educational attainment (academic tracks in this case) yield significant social background effects which are not detected when an outcome such as years of education is used. He coins his perspective the Effectively Maintained Inequality perspective and contends that “socio-economically advantaged actors secure for themselves and their children some degree of advantage, wherever advantages are commonly available” (Lucas 2001: 1652).

In sum, a long tradition of sociological theory and research has linked family background characteristics to educational outcomes. However, there is still vigorous debate about the nature of this association. Given that family background effects are the most commonly researched correlate of educational attainment, I do not focus on these effects in the current study. However, this study does contribute to this area because I assess the effects of a variety of family background factors on educational attainment over the course of educational careers. The study contributes to sociological investigations of family background effects by examining whether the pattern of declining social background effects across educational transitions remains in models that include important structural and cultural characteristics less often studied by ET researchers. Further, this study will examine how the general pattern of individual, cultural and structural characteristics affect educational outcomes of students and whether these patterns are consistent with status attainment or social reproduction approaches to educational inequality.

**Gender and Educational Attainment**

Another key correlate of educational attainment is gender. Throughout early American history and into the mid 20th century, men far outpaced women in educational attainment.
Further, women in the early 20th century were often sorted into “women’s” educational programs such as home economics or secretarial training. Yet, as the so-called second wave of feminism grew in the later half of the 1900’s women’s educational attainment increased rapidly, and by the 1980s, women were graduating from college at rates beyond those of male students. The gendered shift in the distribution of educational attainment has been of interest to scholars, in part, because of its possible ramifications for and relationships with gendered shifts in marriage and fertility patterns and labor market activities (Ahituv and Tienda 2004; Buchmann and DiPrete 2006). For instance, one common explanation for the shift college enrollment and completion is declining levels of gender discrimination in the labor market. This process, whether investigated as a rational change in family decision making or as a manifestation of patriarchal social relationships has made the possible incentives of college entry for females substantially higher, and may have altered parents’ propensities to make early educational investments resources for their daughters (cf. Epstien 1970; Becker and Tomes 1979; Rosenzweig and Schultz 1982, Walby 1986). Another view on the rise in women’s educational attainment considers a cumulative process, this argument maintains that as each generation attains more education, their views on the education of their daughters becomes more sympathetic leading to smaller gender disparities in parental educational investments (Dryler 1998). Female educational performance has also been cited as a possible reason for the growing female college advantage. However, educational the performance of female students has long outpaced that of male students and a seemingly more likely scenario is that decreasing gender discrimination has made the link between academic performance and college completion stronger for females in the past 30 years (Alexander and Eckland 1979). Buchmann and DiPrete (2006) provide a detailed study of the growing college advantage for female students and find that the pattern is attributable mostly to declining rates of...
education among males from families with either a high school educated or absent father, while female students have seen increased enrollments in all family types.

Given the important role of gender in educational attainment, I control for gender in all models presented below. Further, the effect of gender on educational attainment is interesting for the study of educational careers. Other than family background, gender is the correlate of educational attainment, which is best understood in respect to its effects across time (Ahituv and Tienda 2004; Buchmann and DiPrete 2006). Most studies find that differences between men and women appear mostly in older students as young men and women take on labor force and or family roles. Thus, I expect in the models that follow to see the effect of gender mainly at later transition points. The pattern with respect to gender can be useful in clarifying the patterns of how other factors affect student careers to the extent that comparisons can be made between the patterns observed for gender and the other variables utilized here.

**Social Psychological Correlates of Educational Attainment**

Beyond the family background and school variables discussed above, educational researchers have also found that social psychological characteristics can influence academic achievement and adult social statuses. This line of research began with the Wisconsin model of status attainment (Sewell and Hauser 1975; Hauser and Featherman 1977) and has continued to present with the idea that social psychological characteristics, measured in multiple ways, may represent a key factor in explaining why some students persist in education and some students do not. Typically aspirations and expectations, measured either as the students aspirations and expectations or those of their parents, are thought to be similar concepts in both their relationship to family background and educational attainment. However, scholars also see aspirations as
somewhat more idealistic and expectations as more realistic measures of the eventual attainment of students (cf. Mickelson 1990; St. Hilaire 2002).

The Wisconsin model was motivated by Jencks’ (1972) suggestion that personality factors may play a key role in the status attainment process (see e.g., Sewell and Hauser 1975; Hauser and Featherman 1977). The Wisconsin model added social psychological variables such as educational expectations and aspirations to the structural models that had been proposed in the past. The addition of these variables indicated that these factors are indeed related to individual status outcomes of youth, after controlling for family background and ‘ability’ characteristics. Status attainment research also indicated that social psychological factors had independent, direct effects on adult status and do not simply transmit (i.e., mediate) the effects of family background. The Wisconsin model had two main effects on the sociology of education and status attainment. First, this model suggested that to the extent that American society deviated from its meritocratic ideal, these deviations may not be indicative of ‘social injustice,’ in the sense that some talented individuals may simply not aspire to go on to college and enter into lucrative high status occupations. Second, this finding brought ideas about the culture of poverty back to bear on the sociology of education, as some authors decided that differences in aspirations, motivations and social-psychological characteristics may be the reason that Black students do not perform as well as their white counterparts.

Early studies of racial differences in the status attainment processes (c.f. Porter 1974; Kerckhoff 1974; Kerckhoff 1976; Wilson and Portes 1975; Portes and Wilson 1976; Kerckhoff and Campbell 1977) showed educational aspirations and expectations had smaller effects for Black students. These findings motivated many investigations of how social psychological factors play a role in racial disparities in educational attainment. Most work in this area indicates that differences in social psychological orientations are important in the etiology of racial disparities
in educational attainment. Additionally, given the relationship between educational expectations, aspirations and attainment, the same macro-level factors referenced above as determinants of general educational expansion are also thought to effect the general level of expectations and aspirations among students (cf. Hauser and Anderson 1991; Morgan 1996).

In general American students have high educational ambitions. For instance, McClelland (1990a, 1990b) looks at how highly ambitious students stay or deviate from tracks leading to high status employment. McClelland finds that men and individuals from upper white collar households are more likely to sustain high ambition after high school and to attain high status employment. However, McClelland finds that marriage is the main mechanism which takes female and lower status students off track. McClelland argues that the cultural meaning marriage is different for individuals from different types of families and of different genders. This research was important in demonstrated differences among the highly ambitious which called into question the arguments of the initial Wisconsin model researchers. McClelland maintains that investigations of ambitions and educational attainment must acknowledge the role of cultural transmissions in producing aspirations and the role of structural constrains in shaping aspirations later in student careers and determining propensities that students will attain the level of education that they aspire to (see also: Majoribanks 1992; Andres et al. 2007).

Most research suggests that Black students have higher levels of expectations and aspirations than white students do while, while the research on Latino students is less clear (Kao and Tienda 1998; Bohon Johnson and Gorman 2006). There is also evidence that expectations are less stable across the educational careers of minority students than they are for white students which may hamper the ability of minority students to translate high expectations and aspirations into educational attainment (Kao and Tienda 1998). Additionally, the expectations and aspirations of minority students, while still higher than those of white students, may not have
increased as much in recent years as those of white students and may be attributable to changes in the family background characteristics of Black students rather than general changes in typical educational attainment (Hauser and Anderson 1991; Morgan 1996).

Scholarly work that specifically considers Latino aspirations is often linked to migration and the so-called immigrant optimism hypotheses. Given that immigrants often make a choice to leave their home country, the typical reasoning suggests that Latinos should have higher aspirations higher than those of native born Americans. For instance, Portes, McLeod and Parker (1978) look at the aspirations of recent Latino migrants and find little support for the immigrant optimism hypotheses; rather, these authors find that the strongest predictors of immigrant aspirations are measures of educational and occupational success found in their home countries. Further, Kangel and Kao (2001) Latino that students from families with an immigrant parent have lower expectations than other Latinos, despite their higher grades in school.

One interesting take on the link between social psychological characteristics and education is the work of Ogbu and colleagues on oppositional culture (Fordham and Ogbu 1986; Ogbu 1991, 1992, Ogbu and Simons 1998; 2003). Ogbu has argued that because some minority students (namely Black and Latino students) equate school success with oppressive mainstream white society, these students are not motivated to succeed in school. Additionally, Ogbu’s has argued that Black students do not have the same ability to navigate the instrumental structures of the educational system. That is, he maintains that Black students, while maintaining high levels of aspirations and ambitions for further education and high status occupations, do not perceive a direct link between early academic performances and long term educational and occupational goals. Ogbu and other ethnographic researchers have found evidence for this oppositional culture in interpretive studies of American high schools; however, survey researchers have not been able to find the same linkages between motivation and achievement or explain achievement or
attainment differences between races using measures of oppositional culture (Mickelson 1990; Ainsworth-Darnell and Downey 1998; Gamoran 2001; Hallinan 2001; Johnson, Crosnoe and Elder 2001; Akom 2003; Horvat and Lewis 2003; Harris and Robinson 2007). Additionally, the oppositional culture perspective has been criticized as a reiteration of a deficit models of educational inequality (Akom 2008). That is, the theory has been criticized for arguing that if students from involuntary minority groups would act more like their white counterparts they would achieve more educational success. These types of arguments are often characterized as putting the blame for racial inequalities on the individual victims of broad scale social patterns of racial oppression.

While the empirical validity of Ogbu’s theory is precarious, the theory is laudable in that it is one of the few theories that specifically attempts to explain racial inequality in education using historical and contemporaneous factors. Moreover, the theory attempts to explain within group differences among minority groups, rather than just differences between minorities and whites.

Other research on the social psychological correlates of school outcomes has focused on positive self-concept (i.e., feelings of self worth) and locus of control (i.e., an individual’s perceptions of how efficacious s/he is over the environment) as the main correlates of achievement and attainment (Rosenberg 1989; Liu, Kaplan and Risser 1992; Mone, Baker and Jefferies 1995; Mizell 1999; 2000, Ross and Broh 2000, Oates 2004, Mirowsky and Ross 2007). However, even though one or both of these constructs is typically associated with academic outcomes, the causal ordering of self-concept and control preceding academic outcomes is not clear. It is plausible that those students that perform well in school are given feedback that enhances their self concept, making the proper ordering of these concepts problematic. It is also important to look at these factors in relation to race as scholars have noted that although social psychological resources are often linked to social positioning; Black Americans have higher
levels of positive self concept than would be expected (Hughes and Demo 1989). As Hunt et al. (2000) have noted, the assumption of racial similarity in social-psychological processes is often empirically unfounded and simply assumed in social science research.

Beyond these empirical examinations, critical scholars argue that the social statuses are related to future social status through a social psychological process which works through the educational system (Bowles and Gintis 1976; Bourdieu and Passeron 1977). These scholars explain the association between social psychological characteristics, particularly aspirations and expectations, and academic outcomes by suggesting that as students move through the educational system, they come to see what is possible for individuals of their own social background and align their own aspirations to these likely outcomes. The result is that most students end up getting what they want out of the educational system. In turn, the system can perpetuate the idea that it rewards those that are the most motivated and the most talented.

Bowles and Gintis (1976: 128) add a distinctly social-psychological component to their explanation of educational stratification, arguing that the education system must be “consciously organized to facilitate the reproduction of consciousness.” That is, these authors argue that central to the organization of the educational system is that not only does it produce workers with some level of technical knowledge, but it also “produces, labels and rewards personal characteristics relevant to the staffing of positions in the [economic] hierarchy” (Bowles and Gintis 1976: 130). Similarly, Bourdieu and Passeron (1977:161) draw on Bourdieu’s concept of habitus, “a unifying principle of conducts and opinions” which “at every moment of an academic or individual biography tends to reproduce system of objective conditions of which it is the product” to explain how the educational exclusion of students often appears to be the result of their own choices, preferences and actions.
Further exploring Bourdieu’s conceptualization of habitus is instructive as to the differences between critical and mainstream perspectives on the social psychological aspects of educational inequality. According to Bourdieu, habitus is a mental structure which is produced by objective social relationships and social positioning. Habitus, in turn, provides strategies and practices which reproduce the objective conditions from which it is spawned. Thus, according to these theories, social psychological attributes are intractably linked to these objective conditions and are another way in which social background affects educational outcomes. For instance, minority children may indeed be less powerful to change their environments and affect their lives leading to lower levels of locus of control. Additionally, living in a society marred by racist social relations may indeed produce differential sources of self-concept for minority students compared to their white counterparts.

In sum, sociological research and theory has often considered how social psychological factors affect the educational outcomes of students and how these factors contribute to differences in educational attainment by race. One aspect look at less often in this literature however is how these characteristics play out over time. For instance, most models using a reproduction perspective argue that the effects of social psychological and aspirational factors would increase over time. That is, these models maintain that these factors are crucial mechanisms by which the effects of family background are transmitted throughout student’s careers. Status attainment models, in contrast, are more consistent with a pattern that sees diminishing effects of these variables. These models would maintain that as students age, it is academic ability and potential for future earnings that would begin to guide student trajectories. Looking at these factors in a model of educational careers may help clarify these associations. Further, examining how the addition of these variables may affect the pattern of effects for race over time may help us understand the role of these variables in the etiology of racial disparities. In the analyses that
follow, I utilize measures of self concept, locus of control, educational aspirations and expectations to assess the impacts of social psychological characteristics on educational outcomes.

\textit{School Effects on Academic Outcomes}

In addition to bringing social background to the fore of educational research in the sociology of education, the Coleman report also had two findings about school effects which continue to influence research on how school level factors affect student outcomes. First, the report suggested that other than difference between public and catholic schools, school characteristics do not explain difference in academic achievement between students. This finding did not conform to the commonly held notion that one of the reasons that Black children were well behind their white counterparts was because they were segregated to ‘separate but equal’ schools throughout the country. However, the report found that Black students benefited from attending schools were a majority of the students were white, whereas the proportion of Black students had little impact on the achievement of whites. This finding suggested that Black students could benefit from de-segregation in the schools and that this de-segregation would have little impact on white students. This general pattern found by Coleman, that minority students are more affected by school variables, has been borne out by contemporary researchers who continue to look into the effects of school variables on student outcomes.

Stated simply, there are high performing and low performing schools. Students at high performing schools outperform students from low performing schools. The question for school effects research is whether these effects are simply \textit{compositional} (caused by the different individual characteristics of the student bodies of the various schools) or \textit{contextual} (driven by characteristics of the school). However, observational studies of school effects are notoriously
difficult as selection and heterogeneity problems make the demonstration of a causal effect very difficult (Altonji, Elder and Taber 2005). To demonstrate a school effect one would ideally show that different schools produce different outcomes in randomly assigned students. That is, a researcher would want the ability to manipulate schools or school characteristics as a variable; however, in the real world, there is significant choice among parents and students as to what school they will attend. The process by which students are sorted into schools is not random, but is influenced by the same background characteristics that are known to be linked to educational outcomes (e.g., race and SES). Given these analytic difficulties, it is difficult to generalize the findings of school effects research.

Early research on school effects, consisting mostly of re-analysis of the EEOC data was most often concerned with determining what school characteristics could explain the Catholic school effect. Early school effects research typically supported Coleman’s contention that school characteristics are less important than individual characteristics in determining the educational outcomes of individual students (Spady 1973; Sorensen and Hallinan 1979, Fairchild 1984, Keith and Page 1985). Specifically, the EEOC researchers found that while student composition had an impact, particularly on Black students, school resources and funding have little effect on academic outcomes and do not explain academic inequality across schools. This tradition has lead many to accept the idea that school funding differences between schools is not the engine of academic inequality (Hanusek 1981, 1986, 1989, 1991, 1997).

Central to the research issues on school effects has been proper measurement of and interpretation of school characteristics. Some school effects researchers have focused on directly observable characteristics of schools (e.g., percent minority, student teacher ratio) as the primary independent school variables, despite the known difficulty in interpreting these effects. For instance, the seemingly commonsense measure of per-pupil spending is often problematic in
school effects research. If a significant impact of spending is found, the question of what makes spending works is still unanswered (Spady 1973). Other authors focus on theoretical constructs such as social capital or school climate. To that end, Coleman argued that Catholic school differences were primarily due to school social capital rather than school resources. The argument was that some schools foster a climate of support and success whereas other produce a climate of failure with little support or expectations for the students’ academic futures.

Spady’s (1973) early review of the early school effects research found that while these methodological difficulties were widespread and findings were mixed the field was making progress in specifying what aspects of school have an impact on student outcomes. Specifically, measures of resource utilization (i.e., average cost of textbooks, teacher salaries) seemed to be more influential than measures of resource availability (per pupil funding). Indeed, teacher effectiveness, of which teacher salary is sometimes a proxy, at both the school and class levels has been one consistent predictor of achievement of students (Coleman 1965; Rivkin, Hanusek and Kain 2005).

Throughout the mid 1980s methods used to estimate school effects included analysis of aggregate data (Fairchild 1984), OLS regression, in which the typical method was to add school variables to analysis after all individual level variables had been controlled (cf. Spady 1973, Bankston and Caldas 1996), and path analysis (Sorensen and Hallinan 1979). Most early research on school effects suggested that these characteristics were not as important as individual student characteristics in the etiology of educational inequality. However, as Sorensen and Hallinan (1979) note, the lack of a strong theoretical explanation of the lack of school effects and the departure from the widely held view that school characteristics must matter made the finding that resources do not matter difficult for scholars and educators to accept.
Raudenbush and Bryk (1986) built on statistical developments in mixed effects modeling to introduce a hierarchical model for studying school effects, an event which led to a renewed interest in school effects research. This framework for school effects research allowed researchers to better partition variation into school level and student level components which made the statistical modeling of contextual school effects more accessible. Further, the method was an ideal framework to investigate whether individual relationships (e.g., the association between race and achievement) varied across different schools. For instance, Raudenbush and Bryk (1986) showed that the relationship between SES and mathematics achievement varies significantly across schools and that differences between catholic and public schools could explain most of this difference. While this statistical method was not a panacea for the difficulties in assessing school effects, its introduction provided a unifying analytic framework for school effects research.

Raudenbush (1989) reviewed the early applications of HLM models in education and argues that the framework will allow for the explication of school effects. However, past issues of measurement, model specification, and interpretation of statistical results continue to make generalizations of school effects research difficult. While most researchers working in this field agree that schools matter (Thornton and Eckland 1980; Bryk and Thum 1989; Lee and Bryk 1989, Rowan, Raudenbush and Kang 1991; Rumberger 1995, Bankston and Caldas 1996; Roscigno 1998; Mickelson and Health 1999, Rumberger and Palardy 2005) exactly what about schools matters and why is far from clear. For instance, Kreft (1993) argues that school context is important of education and finds that the differential selection processes that distinguish good and poor schools create differential academic climates, which produce differences in academic motivation. In other words, she argues that the contextual effect of school climate is in fact compositional and explained by the differential characteristics of student bodies. In a
comprehensive analysis, Rumbeger and Palardy (2005) find that process/climate variables eliminate the statistical association between SES composition and student achievement.

Consistent with one of Coleman’s main findings, most researchers have found that minority students are more affected by school variables than white students. Racial segregation across or within schools has a negative impact on minority students, and school characteristics can impact achievement gaps between minorities and whites (Thornton and Eckland 1980; Keith and Page 1985; Bryk and Thum 1989; Lee and Smith 1995; Rumberger 1995; Bankston and Caldas 1996; Roscigno 1998; Mickelson and Heath 1999). Additionally, research has linked school differences between minority and white students to theories of ecological disadvantage that explain how racial inequality is perpetuated by historically rooted residential segregation (Garner and Raudenbush 1991; Roscigno Tomaskovic-Devey and Crowley 2006). These studies argue that for racial inequality in neighborhood characteristics may be as influential as schools are in producing and recreating racial inequalities.

One major critique of school effects research has been how scholars conceptualize the outcome of most research designs. Typically, researchers look at how school level variables affect the contemporaneous achievement of students. However, some scholars have argued that the true outcomes of school effects, and the goals of integration policies, are long term differences in students status outcomes and racial beliefs. For instance, perpetuation theory has looked at the issue of long term school effects by investigating how school racial composition affects adult racial beliefs. This idea suggests that the effects of attending a grade school with individuals of diverse racial backgrounds may be found over the long term because individuals that attend these schools will be more comfortable with other racial groups and will participate in less avoidance of these groups. Thus, the theory argues that looking for school effects differences on racial tolerance contemporaneously is not the appropriate outcome of school effects research
(Braddock 1980; Wells and Crain 1994). However, to date, very few researchers have applied this idea of looking at school effects on long term educational outcomes. While specifying the precise mechanism that would link early school placements to eventual academic outcomes is beyond the scope of the current research, this research will begin this discussion by assessing the effects of school placements on educational transitions beyond the immediate time frame.

In sum, the research literature on school effects is suggestive of an association between the structure and climate of schools and student outcomes. However, the lack of strong theoretical explanations of various patterns has hampered the progression of the field to develop convincing demonstrations of the mechanism through which these school characteristics matter. Therefore, little can be concluded about how this information may aid policy makers in altering current patterns in educational stratification. The current project expands on the current literature on school effects by incorporating both structure and process school variables into a model of educational careers. The approach should be effective in clarifying and explicating the association between schools and academic outcomes for individual students. Specifically, the following analyses will investigate difference in educational careers based on early (8th grade) school placement. This approach will allow for an examination of whether the effects of schools may be more evident if examined across educational careers. That is, I ask whether one reason for the lack of clear school effects in previous research is that this research looks for school effects only in the immediate time frame. Rather, I ask whether schools may play a role in a cumulative process and act as another transmitter of the effects of social origins on educational outcomes.
Summary and Research Hypotheses

This section delineates the specific hypotheses tested in this dissertation. I investigate the following 11 hypotheses which represent key areas of debate with the educational literature that a study of educational careers may speak to. These hypotheses are briefly discussed in relation to the extant literature outlined above.

**Question 1: How does race affect the likelihood of transitions to higher grade levels?**

This research aims to expand understanding of the process of educational attainment in part by investigating the effects of racial status on educational transitions looking specifically at how race affects different stages in educational careers and how the effects of race change when controlling for other factors. These hypotheses are centered on determining if a net college advantage for Black and Latino students is specific to college entry or is a persistent feature of educational careers. Additionally, analyses seek to determine if these differences persist when controlling for social psychological and aspirational variables.

H1: Controlling for family background, Black students will have higher probabilities of making all transitions than white students.

H2: Controlling for family background, Latino students will have higher probabilities of making all transitions than white students.

Support for these hypotheses would indicate that the explanations of the net college advantage for Black and Latino students may need to be re-specified to understand how this pattern is produced. Most current explanations look at factors specific to college entry to explain this pattern.
H3: Controlling for family background, Black students will have higher probabilities of making only the post-secondary transition than white students.

H4: Controlling for family background, Latino students will have higher probabilities of making only the post-secondary transition than white students.

Support for these hypotheses would indicate that current explanations of the net college advantage pattern appropriately focus on factors specific to college enrollment and would suggest that this pattern of high transition probabilities for Black and Latino students is specific to the post-secondary transition.

H5: Controlling for family background and social psychological factors will eliminate the net advantage for educational transitions for Black students.

H6: Controlling for family background and social psychological factors will eliminate the net advantage for educational transitions for Latino students.

Support for these hypotheses would support the idea that omitted variables are important factors in understanding the net college advantage. Essentially, support for these hypotheses would indicate that the net college advantage pattern is explained in part because minority students have more advantageous social psychological characteristics at any level of social background, or social psychological factors are more important predictors for minority students compared to white students.

*Question 2: How do social psychological and aspirational characteristics of students affect the likelihood of transitions to higher grade levels?*

Researchers investigating racial differences in educational attainment have often looked at cultural and social psychological variables as possible explanations of these disparities. However, a lack of understanding of how these variables affects student attainment over time has
limited the development of research in this area. This dissertation addresses this gap by looking at the following hypotheses.

H7: The effects of a) locus of control b) self concept c) aspirations and d) expectations will increase as students progress in their educational careers.

H8: The effects of a) locus of control b) self concept c) aspirations and d) expectations will decrease as students progress in their educational careers.

Clarifying the relationship between social psychological factors and educational transitions over time will extend the extant literature on not only the direct effects of these factors on educational careers, but also the literature on how racial differences may be impacted by these factors. For instance, social reproduction models explicitly suggest that the effects of aspirational variables would increase over time as the link between what level of education the student is likely to obtain becomes more apparent and students align their aspirations accordingly. This pattern is also somewhat consistent with oppositional culture models which indicate that oppositional attitudes of racial minorities impede their educational progress. It is commonly thought that these effects would be more apparent in later grades and thus would be consistent with an increasing effect of these variables particularly for Black and Latino students.

Decreasing effects of aspirational and social psychological variables would be more consistent with econometric and status attainment understandings of the educational attainment process. These arguments maintain that as students progress through the educational system their personal characteristics become less important and their academic characteristics become more salient. Status attainment models argue that this process is due to educational sorting and selection; that is, as individuals with lower levels of aspirations would leave the education in earlier grades, the variability in student aspirations would decline and the association between aspirations and attainment would be tempered. Econometric understandings argue similarly that
as students advance through the educational system, academic considerations become of utmost importance, mainly because these considerations are the best evidence that the student has of their possible success in future education. Here again, the expected pattern is that the effects of the aspirational variables would decline as students progress through the educational system.

Question 3: Do school level variables affect the likelihood of educational transitions?

This dissertation further investigates how school level characteristics affect the educational transitions of students. While many scholars have looked at the effects of school characteristics on educational attainment (e.g., test scores) fewer studies have looked at the effects of school characteristics on educational attainment. This study addresses this gap by including school characteristics in models of educational transitions. I analyze how early school placement may impact future educational transitions. To again test how social origins of students affect their educational destinations in an educational career model.

H9: The effects of school variables will be most important in the 10th grade transition.

H10: The effects of school variables will be consistent across educational careers.

H11: The effects of school variables will increase over time.

Support for H9 would suggest that the effects of schools are a direct effect on only the following transitions while the pattern indicated in H10 and H11 would indicate that the effects of one’s early school placement could be an important factor which remains with a student throughout their educational careers. Again, tests of these hypotheses allow us to understand how students’ social origins affect their eventual education by explicitly looking at how these factors affect various instances of student careers.
CHAPTER IV

DATA AND METHODS

In this chapter, I describe characteristics of the sample and methodologies employed to analyze the proposed relationships among race, family background, social psychological factors, school effects, and educational transitions. First, the data source is described in detail. Second, the measurement of all analytic variables is outlined. Finally, the statistical procedures used in this study are discussed.

Sample

Data for the current project are drawn from the National Educational Longitudinal Study (NELS) collected by the National Center for Educational Statistics (NCES) from 1988 through 2000. The NELS study is one of three large nationally representative longitudinal studies implemented by NCES, with the National Longitudinal Study of the High School Class of 1972 (NLS-72) and High School and Beyond (HS&B) comprising the two additional studies. These studies were conducted to provide nationally representative policy relevant data about education in the United States.

The NELS study was initiated in the spring semester of the 1987-1988 school year when data were collected from over 24,000 eighth graders in 1,052 schools in the United States (NCES 2002). After the initial data collection, selected subsets of the sample were resurveyed biennially through 2000. Data were collected in the first three waves (1988, 1990, 1992) by in-school

The original NELS sample was selected through stratified sampling. Schools comprised the Primary Sampling Units and were selected with probabilities proportional to 8th grade class size. Further, within each school 8th grade students were randomly selected with about 23 students participating per school. An oversample of about 2,000 Native American, Asian/Pacific Islander, and Latino students were also selected to augment the sample size of these groups.

In each subsequent follow up, a subsample was selected in effort to retain the nationally representative nature of the original sample. The 1990 and 1992 longitudinal samples consisted of 20,706 original NELS members panel with schools again serving as the primary sample units. In 1990 schools were selected based on the number of NELS panel members attending with schools containing more than 11 NELS students sampled with certainty. In 1992, students had dispersed to a large number of schools making planned subsampling difficult, leading the NCES to use identical frames for 1990 and 1992. For the third follow up, sample members were grouped according to various criteria (i.e., drop-out status, SES, race, school type) and differential probabilities of selection were assigned to each group. Cases within each group were selected with probabilities proportional to their second follow up sample weight. The third follow up consisted of about 15,964 students from the original panel. For the fourth follow-up study in 2000, NELS researchers used a similar procedure as in follow up three to select a sub-sample. Students were grouped based on response history and other criteria and a sample rate was assigned to each stratum, within strata students were selected with probabilities proportional to their 3rd follow up sample weight. The fourth follow up yielded a total longitudinal sample of
For the sample employed for this dissertation, after selecting African American, Latino, and white respondents, and omitting cases with missing values on the study variables, I retain a sample of 6,464 cases from 641 of the original schools.

In order to retain the most cases for analyses, I utilize all schools with at least 2 students with valid cases in all study variables. The issue of sample size in multi-level models is somewhat more complex than in other analytic techniques, because in multi-level models there is effectively two samples sizes the group level and the individual level. Most research on multi-level models indicates that the groups sample size (i.e., number of higher level units) is more important for accurate estimation than the number of cases per group (Mass and Jox 2005). Thus, the approach taken here is warranted given the large number of cases (6,646) and groups (641) in the current sample. Nevertheless, analyses were also performed exclude schools with less than 5 cases and excluding schools with less than 10 cases. Results in both cases were substantively identical to those reported here.

Another threat to the validity and generalizability of the results reported here is the substantial amount of missing cases. As noted above, I retain 6,464 cases from a panel of over 12,000 students. Missing data can be an issue for analysts because the results reported using listwise deletion may be biased due to differences between sample members retain and those discarded from the analysis. To assess the degree to which missing data affected the results here, a sensitivity analysis was utilized. To perform this analysis, I estimated a logistic regression using inclusion in the final sample as the outcome and the baseline predictors (see variable descriptions below) of Black, Latino, Male, Family Income, Parent’s marital status, Parents education, 8\textsuperscript{th} grade proficiency, and number of siblings. This analysis included 10,342 of the original cases. The probability of missing was saved from this analysis. The multi-level logistic regressions were reestimated multiplying the weight variable used here (see below for
description) by the probability of missing (cf. Morgan and Mehta 2004). Results from this analysis were substantively identical to those reported here.

To adjust for the complex sample design, the NCES provides sample weights for NELS panel members included in the 1988-2000 longitudinal dataset. These weights adjust for the unequal probability of selection and non-response. Applying sample weights allows an analyst to obtain unbiased estimates of population values. However, because these weights are designed to produce estimates for a sample of some two million students, using raw weighted data will lead to estimated standard errors which are far too small and coverage rates for confidence intervals which are larger than the nominal p-value set by the analyst. Thus, rather than use the raw weights, I use standardized sample weights in the following analyses. Standardized weights allow the analyst to produce unbiased estimates of parameters with inflating the sample size. Standardized weights were computed using the following calculation:

\[
Std \, Weight = \frac{(Weight_i)}{\sum Weight_i},
\]

where \( weight \) is the original sample weight. This procedure produces a weight variable which sums to zero and does not change the effective sample size. While this technique does not produce exact parameter estimates and standard errors for the 8th grade class of 1988, it is far better than producing estimations based on simple random sampling. Additionally, given that the goal of the current research is to estimate relationships between variables rather than point estimates of population values, the approach provides for conservative tests of statistical significance because complex estimates (e.g., regression coefficients) are typically less affected by sample bias than simple estimates (e.g., means and proportions).
Measures

The primary outcome measure used in the current study is educational attainment. However, as noted above, studies of educational careers do not model years of education as a continuous outcome variable. Rather, I model the educational attainment of individuals as a series of dichotomous outcomes where 1 corresponds to a student making a given transition and 0 corresponds to the student not making a given transition. In the context of the current project, I model three educational transitions which span across the study period. Specifically, I model the transitions from 8th to 10th grade (1=yes, measured in 1990), 10th to high school graduation (1=yes, measured in 1992), and graduation to post-secondary enrollment (1=yes, measured in 2000). Conceptualizing outcomes in this way allows an examination of how stable background and time varying individual characteristics affect the probabilities of making particular educational transitions. Further, this strategy allows the effects of these variables to differ over student careers. Table 1 shows the percentages of students making each transition. Not surprisingly, most student transition from 8th to 10th grade (94.71%) and from 10th to graduation (88.08%). Additionally, about 82% of the NELS panel attended at least some form of post secondary education.

Table 1: Weighted Percentage and Odds of Educational Transitions

<table>
<thead>
<tr>
<th></th>
<th>8th-10th Grade</th>
<th>10th-Graduation</th>
<th>Graduation to Post Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>94.71</td>
<td>88.08</td>
<td>82.13</td>
</tr>
<tr>
<td>Odds</td>
<td>17.90</td>
<td>7.39</td>
<td>5.75</td>
</tr>
<tr>
<td>N</td>
<td>6464</td>
<td>5605</td>
<td>3756</td>
</tr>
</tbody>
</table>

Odds and Percentages are weighted estimates, N is non weighted N
See text for variable descriptions
Source: NELS (88/00)
**Time Invariant Independent Variables**

All estimated models control for a set of background characteristics that are known to affect the educational attainment of American students. All of these measures come from the 1988 8th grade survey. Table 2 shows sample means and standard deviations for all individual level variables. *Race* is indexed with two dichotomous items which compare *Black* and *Latino* respondents to white respondents. Table 2 shows that about 11% of the sample is Black and 9% of the sample is Latino. *Gender* is measured with a dichotomous item which compares *Male* to female respondents. About 50% of respondents are male. *Parents Marital Status* is measured with a dichotomous variable that compares those respondents whose parents are married from those respondents whose parents are not married; 81% of the sample comes from families with married parents. *Parents’ Education* is measured as the mean of the students’ mother’s and father’s educational attainment. Respondents that had valid data for only mother’s or father’s educational attainment are given the value for that parent. Parents’ Education was measured on a seven point ordinal scale ranging from 1 ‘did not finish high school’ to 7 ‘PhD, MD, etc’. The mean of this variable is 3.05 which corresponds to average education of some college.

*Family Income* is measured by a 15 point ordinal scale which ranges from 0 ‘no income’ to 15 ‘200,000 or more’. The mean family income is 9.89, corresponding to the $20,000-$25,000 dollar per year range. *Number of Siblings* is a censored variable measured with ‘6 or more’ as the highest category. The mean number of siblings in the sample is 2.23. Finally, *Home Environment* is a summed composite indicated whether a respondent’s family had the following 10 items/characteristics: a specific place for study, a daily newspaper, magazine subscriptions, an encyclopedia, an atlas, a dictionary, a typewriter, a computer, more than 50 books, and a pocket calculator. The average respondent came from a home that owned about 7.46 of the 15 variables.
Table 2: Means and Standard Deviations of Individual Level Variables

<table>
<thead>
<tr>
<th>8th Grade /Background Variables</th>
<th>Mean</th>
<th>Std</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black (1=Yes)</td>
<td>.11</td>
<td>-</td>
<td>6464</td>
</tr>
<tr>
<td>Latino (1=Yes)</td>
<td>.09</td>
<td>-</td>
<td>6464</td>
</tr>
<tr>
<td>Male (1=Yes)</td>
<td>.50</td>
<td>-</td>
<td>6464</td>
</tr>
<tr>
<td>Parent's Married (1=Yes)</td>
<td>.81</td>
<td>-</td>
<td>6464</td>
</tr>
<tr>
<td>Parent's Education</td>
<td>3.05</td>
<td>1.65</td>
<td>6464</td>
</tr>
<tr>
<td>Family Income</td>
<td>9.89</td>
<td>2.49</td>
<td>6464</td>
</tr>
<tr>
<td>Number of Siblings</td>
<td>2.23</td>
<td>1.56</td>
<td>6464</td>
</tr>
<tr>
<td>Home Environment</td>
<td>7.46</td>
<td>1.83</td>
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<tr>
<td>Proficiency</td>
<td>51.98</td>
<td>9.08</td>
<td>6464</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>3.02</td>
<td>.47</td>
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</tr>
<tr>
<td>Self Concept</td>
<td>3.11</td>
<td>.48</td>
<td>6464</td>
</tr>
<tr>
<td>Educational Expectations</td>
<td>3.87</td>
<td>1.78</td>
<td>6464</td>
</tr>
<tr>
<td>Parent's Aspirations</td>
<td>3.96</td>
<td>.81</td>
<td>6464</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>10th Grade Measures</th>
<th>Mean</th>
<th>Std</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency</td>
<td>52.73</td>
<td>8.76</td>
<td>5605</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>3.01</td>
<td>.45</td>
<td>5605</td>
</tr>
<tr>
<td>Self Concept</td>
<td>3.07</td>
<td>.46</td>
<td>5605</td>
</tr>
<tr>
<td>Educational Expectations</td>
<td>3.90</td>
<td>.91</td>
<td>5605</td>
</tr>
<tr>
<td>Parent's Aspirations</td>
<td>3.88</td>
<td>.76</td>
<td>5605</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12th Grade Measures</th>
<th>Mean</th>
<th>Std</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency</td>
<td>54.27</td>
<td>7.68</td>
<td>3756</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>3.09</td>
<td>.44</td>
<td>3756</td>
</tr>
<tr>
<td>Self Concept</td>
<td>3.18</td>
<td>.47</td>
<td>3756</td>
</tr>
<tr>
<td>Educational Expectations</td>
<td>4.14</td>
<td>.78</td>
<td>3756</td>
</tr>
<tr>
<td>Parent's Aspirations</td>
<td>4.15</td>
<td>.74</td>
<td>3756</td>
</tr>
</tbody>
</table>

Means and Standard Deviations are weighted estimates, N is unweighted
Source: NELS (88/00)
See text for description of variable metrics

Time Varying Independent Variables

As noted by Lucas (2001), educational transitions models should include time varying covariates in order to ensure that regression estimates are robust to the functional specification of the model residual distribution. Following this advice, I include five time-varying covariates in the models estimated below. For each time-varying covariate, measures taken in 8th grade are
used to predict transition to 10th grade; measures taken in 10th grade are used to predict transition to high school graduation and measures taken in 12th grade are used to predict the transition to post secondary education. The means and standard deviations of these variables are shown in Table 2.

Proficiency is measured as a composite variable computed as the mean of non-missing math, reading and science proficiency test scores for each student. I use the rescaled NCES scores on proficiency which apply a common metric to proficiency tests administered in different years and tailored to measure the proficiency of students of different ages. As Table 2 shows, the mean of proficiency in the three time points is 51.98, 52.73, and 54.27 for the 8th, 10th and 12th grade samples respectively. Including a time varying measure of proficiency in the models estimated below substantially decreases concerns of unobserved heterogeneity because this measure should capture, in part, any time stable ability characteristics associated with the propensity to persist in educational careers. Locus of Control gauges the degree to which individuals feel that they have control of the events in their lives. This variable is measured as a composite of the following items: I don’t have enough control over my life, in my life good luck is more important than hard work, every time I get ahead something stops me, my plans hardly ever work out so planning makes me unhappy, when I make plans I can make them work, chance and luck are important in life. Respondents indicated their agreement to these items on a four point scale; all items were coded so that higher scores indicate a more internal locus of control score. Students were assigned the mean of their responses to the items and students with at least 4 valid responses are included. Alpha reliabilities for the locus of control measure are .77, .71, and .74 for the three time points used.

Self Concept is a general measure of an individuals self worth and is measured as a composite of the following items: I feel good about my self, I am able to do things as well as
others, on the whole I am satisfied with myself, I certainly feel useless at times, at times I think I am no good at all. Students indicated their agreement with each item on a four point scale. All items were coded to make higher numbers on the self concept measure correspond to more positive self concepts. Respondents were assigned the mean of their responses, and all students with at least 5 responses are included, alpha reliabilities for the self concept measure are .77, .81, and .83 for the three time points used in the study. I include locus of control and self concept in my models for two reasons; first, these variables are two of the most commonly used measures in contemporary social psychological research. Second, I include these general measures of social psychological orientations because they should decrease the degree to which the following educationally specific measures are conflated with general social psychological orientations.

*Educational expectations* measures the level of schooling that the respondent expects to attain and is measured with one item in each of the survey years which asked respondents “how far in school do you think you will get?” The measurement of educational expectations is not consistent across the three NELS surveys. I reconciled the different measurement scales and rescaled the expectations score on a five point scale of 1 “less than high school” 2 “high school diploma only” 3 “some post-secondary” 4 “college diploma” 5 “graduate school or higher”. Table 2 indicates that this measure increases across the three samples of surviving students, but only shows a modest increase from 8th to 10th grade. This pattern is likely due to the different metrics used in the NELS survey for this item; examination of the variables shows that few students indicated “graduate school or higher” in the 10th grade survey.

*Parent’s Aspirations* measures the level of schooling that student’s believe their parents would like to see them attain and is measured with two items in each survey year which asked respondents “how far in school do you think your mother/father want you to go?” Students were assigned the mean of the answer for their mother and father, unless one was missing, in which
case they were given the valid response. Similar to the expectations items, the metric for this question was not consistent across the three data points. Thus, the three aspirations items were rescale on a five point scale of 1 “less than high school” 2 “high school diploma only” 3 “some post-secondary” 4 “college diploma” 5 “graduate school or higher”. Note in table 2 that, similar to expectations, the aspirations score decreases from time 1 to time 2. This pattern is again likely due to the metric used in the 10th grade survey which elicited less responses of “graduate school or higher” than the metrics used in the 8th grade and 12th grade data collection.

### School Level Independent Variables

To investigate effects of school characteristics, I utilize school level predictors in the models presented below. These school level predictors are from the panel members 8th grade schools. Although students change schools throughout the span of the study, I use 8th grade measures as the school level predictors due to statistical limitations. Given this limitation the effects of the 8th grade characteristics on transitions beyond the 8th to 10th grade transition will be carefully interpreted throughout.

_Public Schools_ are indicated with a dichotomous item that compares public school to all others; 75% of the schools used are public. _Percent White Students_ is an ordinal measure of the percent of 8th graders that are non-Hispanic white. This variable ranges from 1 “0-1%” to 10 “100%” the mean of this measure is 6.82 which corresponds to the “81-90%” category. _Percent White Faculty_ is computed by dividing two ordinal measures, one which indexes the number of full time teachers a school employs and one which indexes the number of non-Hispanic white teachers at the school. The two ordinal measures are scaled from 1 “1-10” to 6 “50 or greater”, making the resulting measure a somewhat coarse measure of the proportion of white teachers. The mean of this measure is .91. While this value does not represent an average of 91% white
teachers at a school, it does reflect that most school in the data have a white majority in their faculty.

*Academic Environment* is a composite variable which measures the degree to which academics are emphasized in a school. The measure is the summed score of the following items: 1) Discipline emphasized at this school; 2) Students place a priority on learning 3) Classroom environment is structured; 4) Teachers encourage students to do their best; 5) Students are expected to do their homework; 6) Teacher morale is high; 7) The school day is structured; 8) Deviation from school rules is not tolerated; 9) School Environment is flexible 10) Teachers respond to individual needs 11) students face competition for grades. Each item was scored by the school administrator or principal on a 1-5 likert type scale and schools were given the average score with higher scores indicating a more conducive academic environment. The alpha reliability of the academic environment composite is .83.

*School Behavioral Environment* is a composite variable which indicates the degree to which the school has behavioral problems. Each school administrator or principle was asked to what degree the following behaviors were a problem: student tardiness, absenteeism, class cutting, physical conflicts, robbery or theft, vandalism, and student alcohol use. The administrators answered on a scale of 1-serious to 4-not a problem. All items were reversed so that higher scores on the index relate to more behavioral problems at a school, and schools were assigned the mean of their responses. The alpha reliability for the behavioral problems composite is .834.
Table 3: Means and Standard Deviations of 8th Grade School Variables

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public (1=Yes)</td>
<td>.75</td>
<td>-</td>
<td>641</td>
</tr>
<tr>
<td>Percent White Students</td>
<td>6.82</td>
<td>2.39</td>
<td>641</td>
</tr>
<tr>
<td>Percent White Faculty</td>
<td>.91</td>
<td>.17</td>
<td>641</td>
</tr>
<tr>
<td>Academic Environment</td>
<td>4.11</td>
<td>.48</td>
<td>641</td>
</tr>
<tr>
<td>Behavioral Environment</td>
<td>1.80</td>
<td>.45</td>
<td>641</td>
</tr>
<tr>
<td>Student/Teacher Ratio</td>
<td>17.63</td>
<td>4.67</td>
<td>641</td>
</tr>
</tbody>
</table>

Source: NELS (88/00)
See text for description of variable metrics

Statistical Analyses

In order to test the relationships outlined above, I use tests of mean differences and logistic regression models. Test of mean differences are performed using one way analysis of variance techniques (ANOVA), with Tukey’s post-hoc tests used to make pair-wise comparisons.

To test the associations between the independent variables and educational transitions, I estimate a series of multi-level (or mixed effects) logistic regression models. The logistic regressions estimated below elaborate on the discreet time hazard model of Singer and Willet (1998) and model the log odds of the three educational transitions. Specifically, I use a ‘person-period’ or univariate dataset in which each respondent has as many rows in the dataset as records. That is, a student that does not transition to 10th grade has only one record, a student that does not transition to graduation has two records, and students that make the first two transitions have three records in the dataset. The time period (or transition period) that the record is from is indexed by three dichotomous items corresponding to the three transition periods analyzed; these items are used to allow for different associations between covariates and transitions. Additionally, the multi-level model allows for the probabilities of the three transitions to vary randomly across 8th grade schools.
For instance the unconditional model estimated is:

\[
\log_{ij}\left(\frac{p}{p-1}\right) = T10_{ij} + T12_{ij} + TPS_{ij} \\
+ e10_{ij} + e12_{ij} + \epsilon_{ij}
\]

where \( p \) is the proportion of students \( i \) in school \( j \) making transition \( t \). \( T10 \) is the indicator for transition to 10\textsuperscript{th} grade, \( T12 \) is the indicator for transition to high school graduation and \( TCOLL \) is the indicator for transition to college. These indicator variables representing the discrete time effects can be interpreted as stand ins for the intercept for a regression of each transition outcome on the set of predictors. The \( e10_{ij} \), \( e12_{ij} \), and \( \epsilon_{ij} \) are school specific error terms which account for the distribution of transition probabilities across schools. These school level random effects are scaled on the logit scale and assumed to be \( \sim N(0, G) \). \( G \) is a 3 x 3 variance-covariance matrix that has no specified aprior structure. That is, each 8th grade school group has a unique random effect estimate (variances) for the probabilities of each transition, additionally the model assumes different covariances between \( e10_{ij} \), \( e12_{ij} \), and \( \epsilon_{ij} \), resulting in a model with six estimated variance components (3 variances, 3 covariances).

The estimation of \( e10_{ij} \), \( e12_{ij} \), and \( \epsilon_{ij} \) allow for the estimation of an interclass correlation coefficient (ICC) for each of the three transitions. The ICC estimates the proportion of variability in the outcome that is attributable to (but not explained by) the clustering of students in schools. For multi-level logistic regression models the ICC (shown for \( e10 \)) is estimated as:

\[
\rho = \frac{(e10_{ij})}{(e10_{ij} + e_{ij})}; \quad \text{where } e_{ij} = \pi^2 / 3
\]

As predictors are added to the model, they are added as multiplicative terms relative to each transition, for instance adding the race indicators gives:
This strategy allows for the independent variables to have different associations with educational transitions at the different transition points. For instance, the coefficient for $T_{10}$ (black) is the difference in the log odds of transitioning to 10th grade between a Black student and a white student. All time stable predictors are added to the model in the same way, and continuous predictors are school mean centered. Note that the interpretation of the independent variables are “school specific” estimates, for instance the coefficient for $T_{10}(Black)_{ij}$ represents the difference in the log odds of transitioning between Black and white students in the same 8th grade school – that is, conditioned on the random school effect.

When time varying predictors are added to the model, these variables are school centered within each time point and are indexed by i and t, which indicate that each student i can have a different score on the variable at time t; for instance adding the time-varying measure of proficiency to equation (4) yields:

$$\log_{ijt} \left( \frac{p}{p-1} \right) = T_{10} \cdot ij + T_{12} \cdot ij + TPS \cdot ij$$

$$+ T_{10}(Black) \cdot ij + T_{12}(Black) \cdot ij + TPS(Black) \cdot ij$$

$$+ T_{10}(Latino) \cdot ij + T_{12}(Latino) \cdot ij + TPS(Latino) \cdot ij$$

$$+ e_{10 \cdot j} + e_{12 \cdot j} + eps \cdot j$$

(5)
Here the proficiency measures are added to predict the transition that sequentially follows the time period in which the variable is measured. All of the time varying predictors are added to the model in this way.

Finally, models which include the school level variables add these variables as interactions with the transition indicator variables. For instance, adding the public school indicator variable to equation (5) yields:

\[
\log\left(\frac{P}{P-1}\right) = T10_{ij} + T12_{ij} + TPS_{ij} + T10(Black)_{ij} + T12(Black)_{ij} + TPS(Black)_{ij} + T10(Latino)_{ij} + T12(Latino)_{ij} + TPS(Latino)_{ij} + T10(Proficiency)_{ij} + T12(Proficiency)_{ij} + TPS(Proficiency)_{ij} + T10(Public)_{ij} + T12(Public)_{ij} + TPS(Public)_{ij} + e10_{j} + e12_{j} + eps_{j}
\]

which suggests that the public school indicator variable can impact the distribution of transition probabilities at each time point. Alternately, the school level variables can be interpreted as predicting the conditional school level mean of the log odds of each transition probability conditioning on all the individual level covariates. All models presented in Chapter 5 were estimated using pseudo maximum likelihood techniques by the PROC GLIMMIX procedure in SAS 9.2 (SAS 2009).
CHAPTER V

RESULTS

This chapter presents the results of statistical analyses described above. First, I describe the bivariate results. Second, I detail the results of the multi-level logistic regressions.

Table 4 shows the results of means tests between white, Black and Latino students on the family background variables. As chapter 2 showed, the history of racial domination in the United States has consistently led to a situation where family background characteristics are distributed unequally among racial groups. Thus, I expect that white students will have family backgrounds that are more conducive to educational attainment than Black and Latino students will.

There are significant racial differences in the proportion of students with married parents between the three racial groups (see Table 4). Specifically, 84% of white students come from such families compared to 77% of Latino students and 55% of Black students. Moreover, white students’ parents are more highly educated than the parents of both Black and Latino students. White students’ parents average 3.17 on the education scale, whereas Black and Latino parents average 2.85 and 2.21, respectively. Recall that on the education scale a value of three corresponds to “some college”.

Comparisons of the three racial groups on family income indicate that white students come from families with higher family incomes than Black and Latino students. However, in terms of family income, there is not a significant difference between Black and Latino students. The mean of 10.26 for white students corresponds to about $25,000 to $35,000, whereas the means of Black and Latino students corresponds to $15,000- $19,000 in income per year.
White students have fewer siblings than Black and Latino students do. Specifically, white students have on average 2.12 siblings, while Black student have 2.70 and Latino students have 2.93 siblings. The mean difference in number of siblings for Black and Latino students is not statistically significantly. Furthermore, Black and Latino students come from homes with fewer educational relevant items than white students do; Black and Latino students show no significant differences. On average white student’s families owned 7.67 of the 10 items in the home environment scale, whereas Black student’s families owned 6.67 and Latino students owned 6.51 of these items.

In sum, the results in Table 4 show that, as expected, Black and Latino students come from families with characteristics associated with lower levels of educational attainment compared to white students. I attribute these differences in the distribution of resources across families to the historical processes outlined in Chapter 2. Specifically, a history of racism, manifest in racist ideologies, social practices and public policies continue to produce inequalities in the distribution of social resources. Results in Table 4 also indicate that while Black and Latino students are similar in terms of family income, number of siblings and home environment, there are significant differences between these groups in terms of the proportion of married parents, and the level of parental education.

Table 4: Means of Family Background Variables by Race

<table>
<thead>
<tr>
<th>Variable</th>
<th>White</th>
<th>Black</th>
<th>Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent's Married (1=Yes)</td>
<td>.84</td>
<td>.55</td>
<td>.77</td>
</tr>
<tr>
<td>Parent's Education</td>
<td>3.17</td>
<td>2.86</td>
<td>2.21</td>
</tr>
<tr>
<td>Family Income</td>
<td>10.26</td>
<td>8.20</td>
<td>8.50</td>
</tr>
<tr>
<td>Number of Siblings</td>
<td>2.12</td>
<td>2.70</td>
<td>2.73</td>
</tr>
<tr>
<td>Home Environment</td>
<td>7.67</td>
<td>6.67</td>
<td>6.51</td>
</tr>
</tbody>
</table>

Source: NELS(88/00), N=6464
Note: Means with different superscripts are significantly different (p<.05)
using Tukey's post-hoc test
See text for description of variable metrics
Table 5 displays the results of the mean comparisons for the three racial groups for the time varying covariates used in the analyses. For these comparisons, I estimated separate means tests within each time point in the study. Given that each time point represents a different sample of students, the results in Table 5 should not be taken as indicative of how these factors might change over time within students. As noted above, I expect white students to have higher levels of proficiency and more external loci of control than Black and Latino students; additionally I expect Black students to have more positive self concepts than white and Latino students.

Table 5 shows that at each time point, there are significant racial differences between racial groups in academic proficiency. White students outperform Black and Latino students at each time point, and Latino students consistently outperform Black students. As noted in Chapter 3, there is a substantial academic literature which attempts to explain these racial differences in academic proficiency with many studies showing that these differences are tied to family background factors. Also note in Table 5 that the relative differences between these groups remains relatively stable across the time points used in the study. That is, among the 12th grade persisters in this sample, racial differences in proficiency are similar to those observed among 8th and 10th grade students.

Results for locus of control are not as straightforward as those for proficiency. Among the 8th grade sample, white students have significantly more internal locus of control scores than Black and Latino students do, whereas the means for Black and Latino students are not significantly different. At time 2, white students have significantly more external locus of control scores than Black students do, but are not significantly different than Latino students. Among the 12th grade persisters, there are no significant differences between the three groups.

Turning to self concept, Table 5 shows that Black students have more significantly more positive self concept scores than white students do at each time point in the study. This finding is
consistent with the social psychological literature on racial differences in social psychological resources. White students’ self concept scores are relatively consistent across the time points in the study and in each case are significantly lower than Black students’ scores. Latino students show a somewhat different pattern. In the 8th grade, we see that Latino students have the lowest self concept scores of any of the groups of students. In the 10th grade we observe that Latino students have self concept scores that are similar to the scores of white students, and significantly lower than those of Black students. Further, by the 12th grade, the remaining Latino students have self concept scores that are significantly higher than those of white students and no different from the scores of Black students.

Turning to educational expectations, we see that in the 8th and 10th grades, Black and white students have higher expectations than their Latino counterparts. In the 12th grade sample however, there are no significant racial differences between the three groups. The patterns seen in Table 5 suggest that when differences in expectations exist white and Black students have significantly higher expectations than Latino students. This pattern is consistent with the body of literature that cites these minimal differences between Black and white students as evidence against Ogbu’s theory of oppositional culture (Downey, Ainsworth, and Qian 2009).

Finally, Black students have higher levels of parental aspirations than white students at times 1 and 3, and are significantly higher than Latino students in the 8th grade. There are no significant differences between the three groups in aspirations in the 10th grade. Recall, that the measurement of aspirations was not consistent in the 10th grade survey. Again, these results are consistent with the general research literature which suggests that there are not typically large differences between Black and white students in terms of parent’s aspirations and where these differences do exist, they often favor Black students.
Results in Table 5 generally suggest that the distribution of social psychological characteristics does not correspond directly to the distribution of family background characteristics. For instance, although white students had family background profiles that were beneficial to educational attainment, white students do not consistently have more advantageous social psychological characteristics, this pattern is particularly evident when looking at self concept, educational expectations, and parent’s aspirations.

Table 5: Means of Time Varying Covariates by Time and Race

<table>
<thead>
<tr>
<th></th>
<th>8th Grade</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>Black</td>
<td>Latino</td>
<td></td>
</tr>
<tr>
<td><strong>Proficiency</strong></td>
<td>53.28</td>
<td>45.69</td>
<td>47.81</td>
<td></td>
</tr>
<tr>
<td><strong>Locus of Control</strong></td>
<td>3.04</td>
<td>2.94</td>
<td>2.95</td>
<td></td>
</tr>
<tr>
<td><strong>Self Concept</strong></td>
<td>3.10</td>
<td>3.24</td>
<td>3.04</td>
<td></td>
</tr>
<tr>
<td><strong>Educational Expectations</strong></td>
<td>3.87</td>
<td>3.96</td>
<td>3.66</td>
<td></td>
</tr>
<tr>
<td><strong>Parent's Aspirations</strong></td>
<td>3.96</td>
<td>4.06</td>
<td>3.87</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>10th Grade</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proficiency</strong></td>
<td>53.88</td>
<td>46.40</td>
<td>48.99</td>
<td></td>
</tr>
<tr>
<td><strong>Locus of Control</strong></td>
<td>3.02</td>
<td>2.95</td>
<td>2.94</td>
<td></td>
</tr>
<tr>
<td><strong>Self Concept</strong></td>
<td>3.05</td>
<td>3.24</td>
<td>3.08</td>
<td></td>
</tr>
<tr>
<td><strong>Educational Expectations</strong></td>
<td>3.91</td>
<td>3.93</td>
<td>3.73</td>
<td></td>
</tr>
<tr>
<td><strong>Parent's Aspirations</strong></td>
<td>3.88</td>
<td>3.92</td>
<td>3.88</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>12th Grade</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proficiency</strong></td>
<td>55.14</td>
<td>47.91</td>
<td>51.45</td>
<td></td>
</tr>
<tr>
<td><strong>Locus of Control</strong></td>
<td>3.06</td>
<td>3.06</td>
<td>3.15</td>
<td></td>
</tr>
<tr>
<td><strong>Self Concept</strong></td>
<td>3.16</td>
<td>3.33</td>
<td>3.27</td>
<td></td>
</tr>
<tr>
<td><strong>Educational Expectations</strong></td>
<td>4.15</td>
<td>4.14</td>
<td>4.11</td>
<td></td>
</tr>
<tr>
<td><strong>Parent's Aspirations</strong></td>
<td>4.13</td>
<td>4.29</td>
<td>4.19</td>
<td></td>
</tr>
</tbody>
</table>

Source: NELS(88/00)

Note: Means with different superscripts are significantly different (p<.05) using Tukey's post-hoc test

See text for description of variable metrics

Table 6 shows the means tests for the 8th grade school level variables. Again as noted above, I expect that white students will attend schools with more positive academic and
behavioral characteristics. These differences are attributed to racial inequalities in economic prowess, racial segregation in housing and school funding regimes. Table 6 shows that white students are less likely to attend a public school compared to both Black and Latino students. Specifically, we see that while some 91% of Black and Latino students attend public schools, only 80% of white students do.

White students attend school with significantly more white students than Black and Latino students do. Moreover, whereas whites attend school that on average are about 80-90% white, Black and Latino students attend schools which are about 50-60% white. These patterns are not surprising given the desegregation which took place throughout the 1980’s documented in Chapter 2.

White students attend schools which have significantly more white teachers than Black and Latino students as well. Whereas the white students had an average of .95 on this measure Black and Latino students had values of .81 and .83, respectively. The number of white teachers at a school is often indicative of the pay of teachers given racial disparities in educational credentials such as master’s degrees in teaching.

White students attend schools with significantly more positive academic environments Latino students do. The mean school academic environment differences between white and Black students and between Black and Latino students are not significant. White students also attend school with significantly better behavioral environments than Black and Latino students, whereas the difference between Black and Latino student’s school is not significant. Finally, turning to the student teacher ratio, we see that Latino student attend schools with significantly higher student teacher ratios than Black and white students do. The average student teacher ratio for a Latino student is 18.32, about one more student per class than white (17.31) and Black (17.53) students.
As noted above, there is substantial debate about the relative role of structure school variables such as public school status, racial composition and student teacher ratios, compared to school environment measures such as academic and behavioral environments. From the analyses in Table 6 we see white students’ schools are significantly higher on measures of both structure and environmental than Latino students. Additionally, white students are significantly higher on three of the four structural measures and one of the environmental measures than Black students are.

Table 6: Means of School Variables by Race

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Black</th>
<th>Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public (1=Yes)</td>
<td>.80</td>
<td>.91</td>
<td>.91</td>
</tr>
<tr>
<td>Percent White Students</td>
<td>7.64</td>
<td>5.07</td>
<td>4.83</td>
</tr>
<tr>
<td>Percent White Faculty</td>
<td>.95</td>
<td>.81</td>
<td>.83</td>
</tr>
<tr>
<td>Academic Environment</td>
<td>4.10</td>
<td>4.06</td>
<td>4.03</td>
</tr>
<tr>
<td>Behavioral Environment</td>
<td>1.78</td>
<td>1.90</td>
<td>1.95</td>
</tr>
<tr>
<td>Student/Teacher Ratio</td>
<td>17.31</td>
<td>17.53</td>
<td>18.32</td>
</tr>
</tbody>
</table>

Source: NELS(88/00), n=6464
Note: Means with different superscripts are significantly different (p<.05) using Tukey's post-hoc test
See text for description of variable metrics

Multivariate Analyses

Results of the multi-level logistic regression analyses are displayed in Table 7. For ease of presentation the three transitions analyzed are noted by “A” for the 10th grade transition, “B” for the high school graduation transition, and “C” for the entry into post secondary education. Model 1 in Table 7 is the unconditional model. The estimates in Model 1 correspond to odds ratios of 19.03, 7.554 and 5.48 for the three transitions. These estimates are interpreted as the unconditional log odds of making each transition and essentially serve as the intercepts for the models of the three outcomes. Note that these estimates do not correspond exactly to the odds
ratios in Table 1 because this model controls for the random school effects for educational transitions.

Table 7 also gives the ICC for each transition outcome for each model. Recall that these ICCs represent the proportion of variability in each transition that is attributable to the school level clustering (Guo and Zhao 2000). Here we see that these values range from .56 to .46 for the 10th grade transition, from .33 to .28 for the high school graduation, and from .14 to .21 for the post-secondary transition. These values indicate that a substantial amount of variability in educational transitions clusters among students within the same schools. However, it should be stressed that these estimates do not represent a school effect per se. That is, high levels of within school variance could be due to similarities among the students in particular schools due to the segregated nature of school in American described above.

Also reported in Table 7 are the -2 Pseudo Log Likelihood, the Pseudo Bayesian Information Criteria (BIC) and the Pseudo Akaike Information Criteria (AIC) for each model. While some analytic techniques (logistic regression, probit regression) allow for analysts to select a best fitting model using these fit statistics, as SAS (2009) cautions, these methods cannot be used for multi-level generalized linear models using pseudo maximum likelihood estimation techniques. Rather, in these cases these statistics are only used to assess the differences between models with identical fixed effects and different structures of the error variance covariance matrix.

Model 2 includes the two indicator variables for Black and Latino students, with white students serving as the reference group. Model 2 shows the educational inequality alluded to in chapters 1 and 3. Specifically, Model 2 indicates that Black students are significantly less likely to make the transition to high school graduation ($b=-.38$, $p<.01$, OR=.68), and college enrollment ($b=-.47$, $p<.001$, OR=.628). Additionally, we see that Latino students are less likely to make the
transition to 10th grade (b=-.46, p<.05, OR=.63) and the transition to high school graduation (b=-.76, p<.001, OR=.46). The pattern in Model 2 suggests that racial disparities in educational attainment between white and Latino students may be due to differences in the likelihood of these students to make early grade transitions, whereas the inequalities between white and Black students are produced by different transition probabilities in the later in their educational careers. In sum, Model 2 demonstrates that there are significant racial differences in the probabilities of making educational transitions; these disparities lead to racial inequality in adult educational attainment in the United States.

Model 3 includes gender, family background and academic proficiency to the model of educational transitions. Model 3 shows that adding family background factors to the model erases the negative effects for the Black indicator variable, a finding consistent with the “net Black college advantage” shown in the educational literature. Additionally, we see that the inclusion of these factors also erases any negative effect for Latino students. This pattern of effects suggest that Latino students are somewhat similar to Black students with regard to the net effect of race/ethnicity after controlling for family background effects. More specifically, we see that Black students are significantly more likely to make the 10th grade (b=1.05, p<.001, OR=2.86) and the transition to high school graduation than white students are (b=.40, p<.001, OR=1.49); the negative effect for Black student in the transition to post-secondary education has been reduced to non-significance. Further, Latino students are more likely to make the transition to 10th grade (b=.19, p<.001, OR=1.21) than white students are, and the negative effect for Latino students on the transition to high school graduation has been reduced to non-significance.

Model 3 also shows that while there are no significant differences between male and female students in regard to the first two transitions modeled, we do see that male students are less likely to enroll in college than female students are (b=-.44, p<.001, OR=.644). Further we
see that students with married parents are more likely to make the 10th grade transition only 
(b=.63, p<.001, OR=1.88), whereas we do not see any significant differences later in students’
educational careers.

Parents’ education and family income have the expected positive effects on each
educational transition in Model 3. Students with more highly educated parents are more likely to
make the transition to 10th grade (b=.09, p<.05, OR=1.09), high school graduation (b=.09, p<.01,
OR=1.10) and post-secondary enrollment (b=.17,p<.001, OR=1.18). Students with families that
earn a higher income also are more likely to make the transition to 10th grade (b=.15, p<.001,
OR=1.15), high school graduation (b=.08,p<.01, OR=1.08) and post-secondary enrollment
(b=.19,p<.001, OR= 1.20). Note that Model 3 does not show a pattern of declining effects for
either parent’s education or family income across educational careers. Estimates for the effects of
the number of siblings indicate that individuals from larger families are less likely to make the
10th grade (b=-.14, p<.01, OR=.87) and the transition to high school graduation (b=-.15, p<.001,
OR=.86), number of siblings does not have a significant effect on the transition to post-secondary
education. Home environment has significant effects on the 10th grade transition (b=.17, p<.001,
OR=1.19) and the transition to post-secondary education (b=.10, p<.01, OR=1.10), the home
environment measure did not have a significant effect on the high school graduation outcome.
Finally, the time-varying measure of academic proficiency has a consistent positive effects on
each of the educational transitions (10th grade, b=.08, p<.001, OR=1.08; high school graduation
b=.09, 1.09 p<.05; post-secondary enrollment b=.08, p<.001, OR=1.08), suggesting that students
that perform better on proficiency tests are more likely to continue their educational careers to
higher grade levels. Specifically, these results suggest that a one point increase in proficiency
scores makes students about 8% more likely to make any of the transitions modeled.
In sum, model 3 shows the expected effects seen in the sociological literature on the role of race and family background on educational careers over time. Model 3 additionally demonstrates that the effects of family background factors on educational transitions and the “net black advantage” in educational careers persists when controlling for a time varying measure of academic proficiency. I maintain that the effects in Model 3 are somewhat more robust against claims of omitted variable bias than other models in the literature that have shown similar patterns due to the inclusion of the time varying proficiency measure.

Model 4 includes the social psychological variables of locus of control and self concept as well as student educational expectations and parents’ educational aspirations. With these additional variables included in the model the effects for Black students on the high school graduation transition is now non significant. The positive effect for the 10th grade transition (b=0.096, p<0.01, OR=2.61) and the pattern of no effect for the post-secondary enrollment transition remain consistent with model 3. For Latino students we see that the inclusion of these variables erases the modest Latino advantage in the 10th grade transition observed in model 3. Additionally, the inclusion of these factors makes the probabilities for Latino students to make the high school graduation transition significantly lower than that of white students (b=-.37, p<.05 OR=.69) . The patterns seen in the effects for Black and Latino students when these additionally measures are added to the model suggest that the inclusion of social psychological and aspirational variables to models of racial differences in educational transitions reveals important differences in the educational careers of students of different racial backgrounds.

Looking at other family background factors, we see an interesting pattern in regard to the effects of parents’ education and family income on the educational careers of students. First, parents’ education is no longer significant on either the 10th grade or high school graduation outcome. Although this measure remains a significant predictor of the post-secondary enrollment
transitions (b=.10, p<.01, OR=1.11), the effects have been reduced by 41% from Model 3. Looking at family income, the effects for this variable remain significant and relatively similar to Model 3 for each transition. This pattern of effects for parents’ education and family income indicate that these variables have different roles in the educational outcomes of students. While the effects of parents’ educations on educational transitions are reduced with the inclusion of the social psychological factors, the effects of family income remains almost unchanged holding these factors constant.

Model 4 shows that locus of control has a positive effect on the high school graduation transition only (b=.42, p<.01, OR=1.53), while self concept does not significantly effect any of the transitions modeled. Educational expectations has significant effects on each of the transitions (10th grade, b=.03, p<.05, OR=1.03); graduation b=.56, p<.001, OR=1.76); post-secondary b=.83, p<.001, OR=2.30). Additionally, we see the effects of expectations increase markedly over the three transitions modeled. Aspirations has significant effects on the transition to 10th grade (b=.16, p<.05, OR=1.18), and the transition to post-secondary education (b=.33, p<.005, OR=1.40), this variable does not have a significant effect on the high school graduation transitions. In all cases, the effects of expectations are far greater than the effects of aspirations. Model 4 demonstrates the importance of including social psychological and aspirational variables to models of educational transitions. Specifically, model 4 shows that these variables not only have significant effects on the educational transition probabilities of students, but these inclusion of these variables also altered the patterns of effects for race and family background in possibly revealing ways.

Model 5 is the final main effects model and includes the school level models. First, including the school level measures again alters the patterns of race differences on educational transitions. For Black students we see a similar pattern to model 3 in that Black students are
more likely to make the 10th grade \( (b=1.13, p<.001, \text{OR}=) \) and the high school graduation transition \( (b=.28, p<.001, \text{OR}=) \) than white students are. For Latino students, Model 5 indicates that after we have controlled for all of the measured variables, Latino students do not differ from whites in their probabilities of making the educational transitions modeled here. Thus, after accounting for all measured individual and school level factors used in this analysis, I find evidence of the “net black college advantage” by virtue of Black students’ higher propensity to make the first two modeled transitions. Additionally, I find parity between white and Latino students in the probability of all of the educational transitions measured. The finding of parity in educational transitions between white and Latino students in model 5 suggests that their may be important differences in how background and school factors combine to produce racial differences in educational outcomes. Other individual level effects in Model 5 follow a similar pattern to the effects observed in Model 4.

The school level variables included in Model 5 are the estimated effects of these school level characteristics on the conditional average transition probability in a particular school, conditioning on the individual level effects. Students in public schools have lower probabilities of making the 10th grade \( (b=1.01, p<.05, \text{OR}=) \) and post-secondary transitions \( (-1.20, p<.05) \) than students in private schools are. These findings are in accord with the literature on school effects which consistently shows private school students out perform their public school counterparts in achievement, and expand on this literature by showing a private school effect for educational transitions as well. Additionally, we see that schools with a higher proportion of white students also show a positive effect, here for the high school graduation transitions \( (b=.15, p<.001, \text{OR}=) \), percent white students does not have significant effects on the other two transitions. Behavioral environment has significant negative effects on the 8th grade \( (b=-1.08, p<.01, \text{OR}=) \) and high school graduation transitions \( (b=-72, p<.001, \text{OR}=) \). This effect shows that social environmental
characteristics of schools have significant effects on the probabilities of educational transitions controlling for the individual and school level factors measured here. The student teacher ratio measure has significant negative effects on the probabilities of post-secondary educational transitions ($b=-.03, p<.05, OR=$). Finally and also noteworthy from Model 5 are the null findings for percent white faculty and academic environment measures. Findings indicate that these measures, both of which are often thought to gauge the academic quality of the school have no significant effects on the probabilities of making educational transitions.

*Individual Level Interactions*

Table 8 shows the estimates for all significant interaction effects of the individual level variables and the race indicators. For ease of presentation Table 8 shows the interaction effects only, however, the estimates come from models in which the interaction terms were added to Model 5 in Table 7. Model 1 in Table 8 shows that for the high school graduation transition, the positive effect for Black students is reduced significantly for students whose parents are married ($b=.60, p<.05$). This result is suggestive of the pattern found in prior research which indicated that the net Black advantage in educational transitions is particularly strong among students with less
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Fit Statistics

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Notes: Time effects are effects of time indicator variables

Source: NELS (88/00), N=6464

**p<.05, **p<.01, ***p<.001
advantageous family backgrounds. The results in Model 2 indicate that the effects of parent’s education on the high school graduation transitions ($b=-.23, p<.05$), and the post-secondary transition ($b=-.28, p<.05$) is smaller for Latino students. This pattern indicates that Latino students do not see the same benefits to parents’ education as white and Black students do.

Model 3 shows the results for the interaction of the race indicator variables with the measure of family income. An interesting pattern for both Black and Latino students emerges. First, the effects of family income are stronger for Black students than white students for the 10th grade transition ($b=.24, p<.01$); however, the effects of family income on the probabilities of educational transitions are lower for Black students than white students for both the high school graduation ($b=-.11, p<.05$) and the post-secondary enrollment outcome ($b=-.15, p<.05$). Similarly, for Latino students, the effect of family income on educational transitions is somewhat stronger for Latinos for the high school graduation transitions ($b=.02, p<.01$), and the effect is smaller for Latino students in the post-secondary enrollment model ($b=-.12, p<.01$). These effects suggest a complex process in which the effects of background factors such as family income may vary by race and time in its impact on the transition to the next step in an educational career.

The interactions for expectations with the Black indicator variable are also suggestive of complexity in the process of educational careers. Here we see that for the high school graduation outcome, the effects of expectations is significantly lower for Black students than it is for white students ($b=-.34, p<.01$). However, for post-secondary enrollment, the effect of expectations for Black students is significantly greater than the effect for white students ($b=.51, p<.01$).

Finally, the effects of aspirations on educational transitions also vary by race. Specifically there is a consistent pattern in which the effect of aspirations is significantly lower for minority students that for white students. This pattern is observed for Black students for the
10th grade (b=-.58, p<.05) and high school graduation transition (b=-.27, p<.05). For Latino students, this effect is observed for the high school graduation and post-secondary enrollment transitions.

**Cross-Level Interactions**

Table 9 displays the results for the cross-level interactions analyses. Similar to Table 8, the results in this table are derived from models which include all of the effects from Table 7, Model 5. The cross-level interactions test whether the effect of a particular individual level variable changes with change in the characteristic of schools. For the 10th grade transition, there is a significant negative interaction between the Black indicator variable and the percent white faculty at a school (b=-3.328, p<.05; Table 9, Model 1). This finding suggests that the positive effect for Black students is decreased substantially at school with a large proportion of white teachers. Interestingly, this effect is not observed for the other transitions modeled. The next two significant interactions effects are for the interaction of the Black indicator variable with the measure of behavioral environment at a school interaction. For the 10th grade transition we see that the positive effect of the Black indicator variable is stronger in schools with worse behavioral environments (b=1.21, p<.05). I also find a similar pattern for the post-secondary transition (b=1.09, p<.05), however, neither Black nor Behavioral environment were significant in for this transition in Model 5 of Table 7. One final interaction effect is observed in Table 9; as we see increasing student teacher ratios in schools leading to an increased positive effect for Black student for the high school graduation transitions (b=.13, p<.01). In sum, the results in Table 9 indicate that in general the net Black college advantage is stronger is school with characteristics typically associated with less academic success for students. Black student probabilities for educational transitions are higher in school with less white teachers, worse behavioral
environment and higher student teacher ratios. School characteristics did not vary the effects for Latino students for any of the modeled transitions.
Table 8: Individual Level Interaction Effects on Educational Transitions; A=10th Grade, B=12th Grade, C=Post Secondary

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<tr>
<td>H (Latino*Expectations)</td>
<td>-0.02</td>
<td>-0.08</td>
<td>0.04</td>
</tr>
<tr>
<td>I (Black*Aspirations)</td>
<td>-0.58*</td>
<td>-0.27*</td>
<td>0.26*</td>
</tr>
<tr>
<td>J (Latino*Aspirations)</td>
<td>-0.15</td>
<td>-0.38*</td>
<td>-0.45*</td>
</tr>
</tbody>
</table>

Source: NELS (88/00), N=6464
Notes: Time effects are effects of time indicator variables. Models include all variables from Model 5, Table 7; *p<.05, **p<.01, ***p<.001
Effect estimates are in log odds
See text for variables metrics

Table 9: Cross-Level Interaction Effects on Educational Transitions; A=10th Grade, B=12th Grade, C=Post Secondary

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Black)</td>
<td>-3.28</td>
<td>0.87</td>
<td>1.70</td>
</tr>
<tr>
<td>B (Percent White Faculty)</td>
<td>-0.64</td>
<td>0.14</td>
<td>0.88</td>
</tr>
<tr>
<td>C (Latino)</td>
<td>-0.15</td>
<td>-0.38</td>
<td>-0.45</td>
</tr>
<tr>
<td>D (Behavioral Environment)</td>
<td>1.21**</td>
<td>0.54</td>
<td>1.08</td>
</tr>
<tr>
<td>E (Student/Teacher Ratio)</td>
<td>0.04**</td>
<td>0.13**</td>
<td>0.01**</td>
</tr>
<tr>
<td>F (Latino*Percent White Faculty)</td>
<td>0.02</td>
<td>0.03</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Source: NELS (88/00), N=6464
Notes: Models include all variables from Model 5, Table 7; *p<.05, **p<.01, ***p<.001
Effect estimates are in log odds
See text for variables metrics
CHAPTER VI
DISCUSSION AND CONCLUSIONS

This study examined racial differences in the educational careers of Black white and Latino students in the United States. Further, this study examined whether observed racial differences in educational careers were consistent with major theoretical statements about race and education in contemporary society. This chapter summarizes the main findings of the study and discusses these findings in relation to the sociological literature and research hypotheses described in Chapter 3. The chapter begins by reviewing the findings of the mean comparisons and briefly describing these in relation to current debates about race generally in the United States. Next, I review the findings of the linear models and the tests of the study hypotheses. Finally, I conclude with suggestions for how future research may continue to expand understandings of how the educational system impacts racial inequality in the United States. Better understanding of the etiology of persistent educational disadvantage could lead to innovative social policies and interventions designed to make the educational system more fair and just for all students.

*Family Background Differences by Race*

This study investigated racial differences in family background characteristics. I found, consistent with sociological literature, that white students had more advantageous social backgrounds than Black and Latino students. Specifically, I found that white students are more
likely to come from families with married parents, more parental education, higher family incomes, fewer siblings and more educational resources in the home than Black or Latino students do. Additionally, analyses revealed that Latino students are more likely to have married parents than Black students, and that Latino students had the lower parental education than Black students. While most of these patterns have been documented in the sociological literature, these analyses were pursued here to demonstrate that the pattern of racial domination throughout American history, described in Chapter 2, has lead to a contemporary situation in which Black and Latino students have fewer familial resources than white students do. Note that each of these family background factors have been shown to affect educational attainment.

Some authors have argued that racial discrimination is no longer a pressing social issue in American life (Steele 1991). As the analyses comparing racial groups on family background show, while racial discrimination in its most overt forms may have declined in recent years (however see: Feagin and McKinney 2005), racial inequality remains a ubiquitous aspect of American social life. These patterns of racial differences in family background characteristics, particularly when understood in the appropriate historical context, are a reminder that expecting students from different racial background to attain similar levels of education in a “color-blind” educational context is not likely without social policies designed to level the playing field and make the education system equitable for all students. Scholars interested in alleviating racial inequality in American society should continue to document how race neutral social practices continue to contribute to racial inequality in social positioning and should continue to use theoretical models that separate racial discrimination and prejudice from racial inequality as two different albeit related phenomenon.
Time Varying Variables by Race

The second set of analyses I pursued compared white, Black, and Latino students on mean levels of the time-varying academic and social psychological characteristics. First, I examined racial differences in academic proficiency. Here I found, consistent with expectations, that white students outperformed Black and Latino students at all three time points examined. Additionally, I find that at all three time points examined white students scored about 15% higher than their Black counterparts. The consistent difference between Black and white students’ proficiency levels provides some evidence that Black students may not be selected into higher grade levels more strictly, at least not based on academic proficiency. That is, some analysts have argued that Black students may be more strictly selected into higher grade levels, this argument suggests a pattern in which the mean differences in academic proficiency would tend toward parity as students progress and under performing Black students are selected out of the educational system (c.f. Rivkin 1995). In contrast the pattern found suggests that differences between Black and white students in academic proficiency remain stable throughout students’ educational careers. Among Latino students the observed pattern is more consistent with a model of stricter selection at lower grade levels. That is, although white students attain scores that are about 10% higher than Latino students at grade 8. By the 12th grade this differences is reduced to only 6%. While not conclusive, these analyses give some indication that the process of selection on academic characteristics is not equivalent among white, Black and Latino students. Specifically, these findings suggest that a selection process on academic variables may be more important for Latino than Black students.

Next, I examined racial differences in the degree to which students have an external locus of control at each time point. To review, I found that white students had more external loci of control than either Black or Latino students in the 8th grade and that white and Latino students
had more external loci of control than Black students at grade 10. No significant racial differences in locus of control were observed among the 12th grade sample. Also notable, was a pattern showing that while locus of control among white students was similar across the three time points, the loci of control of Black and Latino students became somewhat more external across the three successive samples. Again, this pattern could be produced by one of two processes. First, this could be evidence that Black and Latino students earlier transitions are more linked to locus of control that the transitions of white students are. Thus, in the 12th grade sample, we see less racial heterogeneity in terms of locus of control. Alternately, this pattern could indicate that Black and Latino students see their loci of control become more external throughout their educational careers than white students do. This empirical question should be examined in future studies. Indeed, an explicit examination of how factors such as locus of control change over time could be interesting and fruitful ways of testing the different socialization processes suggested by status attainment and social reproduction models.

Tests of mean differences in self concept between the three racial groups showed that Black students consistently had more positive self concepts than white and Latino students. Further, I found that white students had more positive self concepts than Latino students in the 8th grade sample, Latino students had more positive self concepts than white students at grade 12. I observe a general pattern for self concept which shows students in each successive sample with more positive self concepts than in the early grades. The results in regard to mean differences in self concept among Black, white and Latino students are generally consistent with the sociological literature which has found higher levels self concept among Black samples compared to whites (cf. Hughes and Demo 1989; Mizell 1999, 2000).

Mean difference tests for education expectations shows that Black and white students had higher expectations than Latino students in grades 8 and 10, however, I did not observe any racial
differences in educational expectations in the 12th grade sample. In terms of parental aspirations, I find that Black students had significantly higher aspirations than white students in both the 8th and 12th grade survey year. Turning to parents’ aspirations, analyses revealed that Black students had higher aspirations than white and Latino students did in the 8th and grade sample. Further, I found that white students outpaced Latino students in parents’ aspirations in the 8th grade sample, yet Latino students had higher parents’ aspirations in the 12th grade sample. Additionally, parents’ aspirations increased substantially from sample to sample for each racial group.

Studies of educational aspirations and expectations have been important components of the scholarly literature on racial differences in education. These studies, and the current study, have often looked at how aspirations affect educational outcomes among students of different racial groups. Future studies should continue to address this issue and take advantage of contemporary longitudinal data analysis strategies to determine how which produces difference in aspirations and expectations trajectories is similar for different racial groups. Better understanding of the process underlying the development of ambitions among students would lead to a better specification of how these differences in ambition play into racial inequality in educational outcomes. The omission of these considerations due to the analytic strategy pursued here is a limitation of the current research project.

**School Differences by Race**

Analyses comparing white Black and Latino students showed consistent with expectations that white students attended 8th grade schools with characteristics more conducive to educational attainment than Black and Latino students. White students were more likely to attend public schools, schools with a higher proportion of white students, more white teachers, and better behavioral environments than Black or Latino students. Further, I find that Black students
attend schools with a lower proportion of white faculty than Latino students. Latino students also attend schools with the higher student teacher ratio of any of the three racial groups studied here. Finally, I find that white students attend schools with better academic environments than Latino students do. Results of the tests of mean differences in school characteristics are consistent with the extant literature on school re-segregation (Orfield 1999). As noted above, there have been many popular accounts that racism and discrimination are not pressing issues in contemporary America. In regard to education these ideas have had tangible impacts in dismantling the liberal reforms of the 1960-70s which were designed to reduce racial heterogeneity in school populations. The U.S. Supreme Court recently ruled that the racial background of students cannot have any part in school enrollment policies and the court effectively stated that ‘color-blind’ policies were the best way to end racial disparities in education (Parents Involved in Community Schools vs. Seattle School District 2007). As shown here and in other publications these arguments are simply not consistent with current or historical evidence regarding patterns of racial segregation in schools. Rather, the more likely scenario is that the elimination of race from considerations of school enrollment will lead to increased levels of racial segregation in U.S. schools (Orfield 1999). While Chief Justice John Roberts may believe that “the best way to stop discrimination on the basis of race is to stop discriminating on the basis of race” (Parents Involved in Community Schools vs. Seattle School District 2007: 40-41) social policies based on this understanding of race in contemporary society has little promise of ending racial inequality in school quality in coming years.

Mean comparisons between the three racial groups were not the main analytic focus of the current research. These analyses were pursued to provide background for interpretations of patterns observed in the linear statistical models. The comparisons on mean levels of family background, aspirational and social psychological and school level variables indicates that
minority students come from family backgrounds and attend school with characteristics less advantageous for educational attainment. Additionally, I found that the distributions of social psychological attributes do not directly follow from the distribution of material resources. Rather, I found that these attributes may develop somewhat independently of family background characteristics. This pattern is one reason why researchers continue to investigate these factors as sources of residual racial differences in educational attainment that remain after accounting for family background factors. However, more theoretical and empirical work should look at how these attributes are developed among students of different racial backgrounds and these patterns should be incorporated in sociological theories of educational attainment. Many scholars have investigated the role of aspirational factors as transmitters of family background and structural positioning, while these factors are related, the concept of a direct relationship is not supported by most empirical work in this area. Other approaches which consider differences in orientations between racial groups as causes of differences in educational attainment assume that racial minorities will often have lower levels of these attributes and this may explain gaps in educational outcomes. Yet, as noted this pattern is also not supported by current empirical trends. I maintain that approaches should be pursued that look at the high ambitions of minority students as an agentic response to structural disadvantage. These approaches may be the most consistent empirical patterns that find minority students higher levels of some social-psychological resources to be a somewhat equalizing factor in educational outcomes.

Social policies and interventions designed to further bolster the social-psychological resources of minority students could be especially helpful in reversing educational disadvantage. As the results here indicate, these factors are important correlates of educational attainment and minorities students’ higher levels of these resources is a key reason why these students may achieve levels of education higher than expected given their economic backgrounds. Further,
Interventions designed to enhance the social psychological resources of students may be more cost effective and politically feasible than policies aimed at reducing economic inequalities between racial groups. Additionally, these approaches should be merged with practical guidance to students on what steps need to be taken to allow students to translate high ambitions into educational success.

**Linear Model Results**

The main study hypotheses described in Chapter 3 were tested with the multi-level logistic regression models. The first set of hypotheses looked at the net effects of racial status on educational transitions. Before looking at the results of Hypotheses 1 and 2, I first describe some other patterns found regarding the effects of racial status. First, I found that in a model using only race as a predictor variable, both Black and Latino students were less likely than white students to graduate from high school. Black students were less likely than white students to enter college, conditional on high school graduation and Latino students were less likely than white students to enter the 10th grade. These unconditional findings are interesting because they provide evidence that the process of educational inequality is different for Black and Latino students and indicate that studies of educational inequality in contemporary U.S. society should be sensitive to differences between these two groups. Specifically, these results indicate that Latino students begin to fall behind white students earlier in their educational careers and that the main breaking points for these students are in the earlier grade levels. For Black students, there is a somewhat different pattern. Black students seemingly begin to fall behind their white counterparts at later educational stages relative to Latino students.

Findings from the logistic regression indicate that there was not clear support for hypotheses 1, 2, 3 or 4. That is, I did not find a pattern for Black or Latino students that indicated
an advantage in educational transitions exists across every transitions or a pattern which suggested that the net minority advantage pattern exists only for college enrollment. Specifically, I find that controlling for family background characteristics Black and Latino students were more likely to make the 8th to 10th grade transition than white students are. This pattern points to one of the novel findings produced in this study, namely, that the ‘net college advantage’ pattern found in recent sociological studies may be produced by differences in early educational careers rather than differences specific to college enrollment. For instance, a model which looked only at the post-college destinations of high school graduates would not have found any evidence of a net college advantage for Black or Latino students. It is only when a cohort is followed from 8th grade to post-secondary enrollment that differences in transition probabilities culminate in a net college advantage for minority students.

While the pattern found in the logistic regression analyses did not completely support hypotheses 1 and 2, the findings do provide evidence against explanations of a net college advantage pattern which focus only on factors such as labor market opportunities and college funding regiments which are specific to college enrollment. Looking at the pattern of effects for gender is instructive in this regard as differential labor market opportunities are a common explanation of the differences between men’s and women’s college enrollment patterns. A labor market explanation is consistent with the pattern found for gender in the logistic regression analyses. Specifically, I found men and women did not have different probabilities of either enrolling in 10th grade or graduating from college, yet women were more likely to enter post-secondary education than men were, conditional of high school graduation. For minority students, I do not find a pattern consistent with this argument. Rather, I find that at any level of family background Black white and Latino high school graduates have equal probabilities to enter post-secondary education. Again, my analyses indicate that differences in college enrollment
between racial groups could be due to differences in the probabilities that students make earlier
grade transitions.

Hypotheses 5 and 6 considered how the addition of the social psychological and
aspirational variables used in this study may affect the pattern of the Black and Latino
coefficients. Recall that arguments I outlined earlier suggest that the inclusion of these variables
into models of educational transitions might explain the net advantage for Black and Latino
students. The results in regard to hypotheses 5 and 6 are again mixed. First I find partial support
for hypothesis 5; specifically, I find that for the high school graduation transition, the inclusion of
the social psychological and aspirational factors indeed eliminates the net advantage for Black
students. This finding is consistent with arguments that maintain the net college advantage
pattern for Black students may be explained by differences in social psychological and
aspirational orientations for these students. However, I also find, in opposition to Hypothesis 5,
that the inclusion of these variables did not eliminate the net advantage for Black students for the
10th grade transition. This indicates that while the argument described above about the role of
social psychological and aspiration factors explaining the net Black advantage in educational
transitions may be specific to transitions made during students’ high school careers.

For Latino students the pattern is again mixed in regard to hypothesis 6 and is quite
different from the pattern found for Black students. First, I found that for Latino students, the
 inclusion of the social psychological and aspirational variables eliminated the observed advantage
for the 10th grade transition. A pattern consistent with Hypothesis 6. However, I also found that
the inclusion of the variables altered the pattern of the Latino effect for the high school graduation
transition in a manner opposite of what this hypothesis suggested. That is, the inclusion of these
variables revealed a Latino disadvantage for high school graduation that was not seen in models
only including family background. This finding suggests that while aspirational factors are
important contributors to the process of educational attainment among Latino students, these factors may not operate in the same fashion for Latino students as they do for Black students. Looking at the high school graduation transition is instructive in this regard. For Black students, I observe that including aspirational and social psychological factors eliminated the advantage seen for Black students. In contrast, for Latino students I find that the inclusion of social psychological variables revealed a disadvantage in high school graduation not seen in previous models.

Thus, in general that pattern revealed is that after accounting for these characteristics, the effects of racial background is more similar to the unconditional model than the model controlling for family background. It appears that aspirational and social psychological factors may be important avenues by which racial background is translated into educational inequality. Further, it does not appear that the social psychological and aspirational variables are simply transmitters of family economic characteristics, but there are important differences based on racial background. Part of the reason for a net college advantage for minority students is that these students have higher educational expectations and aspirations than white students do.

Family background characteristics had expected effects; students from more advantageous family backgrounds are more likely to persist in education. I found the expected effects on one or more transitions for each of the family background characteristics of parents’ marital status, parents’ education, family income, number of siblings and home environment. What is notable from the analysis is that I do not find a clear pattern of declining effects for family background characteristics on educational attainment. Rather, I find that the coefficients for family background are often similar or even stronger at later grade transition compared to earlier grade transitions. These findings contrast somewhat with the extant literature on educational transitions. However, one elaboration included here that is not typically included in educational transitions models is that I include a time-varying measure of academic proficiency in
my analyses. Many theoretical and conceptual models have been built around the pattern of declining family background effects. Often these models are consistent with a status attainment perspective that broadly argues that as student progress through their educational careers, they begin to create separation between their own attributes and their family backgrounds. However, my findings are more consistent with a social reproduction model which argues that family background characteristics are more persistent in their effects throughout students’ educational careers. Additionally, differences in that patterns of some variables indicate that conceptualizing family background characteristics as a singular factor may be mistaken. That is, analysts should attempt to discern why family income may operate in a different fashion than parents’ education throughout student careers. It is possible that students whose parents are highly educated will be more prepared for school at early grades and out perform other students because of the cultural capital transmitted to these students by their parents. Yet, at the time of college enrollment, family incomes may be more influential because of their direct relationship to the prospects of the student financing their college careers or the need of the student to contribute to family income.

Scholars should continue to specify how different family background characteristics play a role in producing differences in student outcomes at different points in students’ educational careers.

Hypotheses 7 and 8 considered the effects of the time-varying social psychological and aspiration variables. Recall that hypothesis 7 suggested increasing effects of these variables over time, while Hypothesis 8 suggested decreasing effects of these variables. Results from logistic regression analyses support hypothesis 7. For instance, I found that academic expectations had a positive effect on each of the three transitions modeled, and that the pattern indicates that expectations increases in its effects throughout educational careers. Parents’ aspirations had less consistent effects (i.e., no effect for high school graduation) yet this variable did show a stronger effect on the college entry transition than on either the 10th grade or high school graduation
model. These patterns in respect to expectations are consistent with a social reproduction model which argues that students align their aspirations and expectations with whatever outcome is likely for them and become to desire the inevitable from their educational experiences. I also find that locus of control is influential for high school graduation only and that self concept has no effects on any transition modeled here. In all, social psychological and aspirational variables have stronger effects at later educational stages.

Hypotheses 9, 10 and 11 considered the pattern of effects of 8th grade school level characteristics on educational attainment. Again these analyses were pursued to assess how the characteristics of the students 8th grade school effected their future educational transitions and whether the effects of 8th grade school were only seen for the most immediate (i.e., 10th grade transition) outcome. The pattern of effects for the school level variables is somewhat mixed and are not clearly supportive of hypothesis 9, 10 or 11. For instance, analyses indicate that public school students were less likely to make the 10th grade and post-secondary transitions compared to private school students, and that this effect is somewhat more pronounced for the college enrollment transition. This finding is consistent with hypothesis 11 and with the literature on school effects which consistently finds achievement differences between public and private school students and suggests the private school effect is also relevant for educational attainment as well. Additionally, I found that students in schools with higher proportions of white students were more likely to graduate from high school. Yet, this variable did not have any effects on the other two transitions modeled. The pattern in regard to the proportions of white students is not consistent with hypothesis 9, 10 or 11. I find that the school behavioral environment is an important predictor of both the 10th and high school graduation transition, yet this variable does not have effects on college enrollment. This variable captures the degree to which disruptive behaviors of students may hamper the learning environment in a particular school. Thus, this
variable is somewhat akin to the concept of ‘school social capital’ used in the school effects literature. I find, consistent with this literature that school’s social environment is an important factor for educational attainment. The pattern with regard to the effects of this variable over time is most consistent with hypothesis 9 as the effect of the variable is somewhat smaller for the high school graduation outcome compared to the 10th grade transition outcome. Future research should continue to investigate the processes by which peer influences and group based student norms affect student educational outcomes. Additionally, researchers should attempt to determine the sources of school social capital and how this concept can aid policy makers and other stakeholders in reforming early educational structures. Finally, I find that student teacher ratio is a negative predictor of college enrollment only. This pattern is consistent with hypothesis 11 which indicates increasing effects of school variables over time. In general, although the patterns observed in regard to school variables are not conclusive, the partial support found for hypotheses 10 and 11 provide some evidence that researchers interested in school variables might turn to more long term outcomes to assess how these factors affect student careers and whether these factors are transmitters of the impact of family background on student outcomes.

**Individual Level Interaction Effects**

Interaction analyses were pursued to determine whether there were process differences between Black, Latino, and white students and to determine if these process differences were consistent with a status attainment or social reproduction approach. The first interaction effect found indicated that the advantage in high school graduation for Black students was smaller for those students that married parents. This result is consistent with students that have found that the net college advantage for Black students may more pronounced for students with lower SES backgrounds. A similar pattern is found for Latino students in regard to parent’s educational
level. That is, for Latino students I find that parent’s education is not as strong of a predictor of educational attainment as it is for Black and white students.

The process differences found with respect to family income are less clear. Here I find that family income has a stronger effect for Black students for the 10th grade transition. This finding is in contrast to the literature which suggests that the net advantage for Black students is more pronounced among those from lower SES backgrounds. Yet, the effect of family income for Black students becomes smaller than the effect for white students for the high school graduation and college entry outcomes. Thus, the pattern effects for family background suggest a complex process by which educational attainment is affected by family incomes and parental education which may not follow a pattern consistent with explanations in the ET research literature.

Interesting patterns were also found in respect to the interaction of the aspirational variables and the race indicators. For Black students I found that expectations and aspirations had smaller effects for the high school graduation transition and that aspirations had a smaller effect on the 10th grade outcome. Curiously, I found that expectations had a more positive effect on the post-secondary transition for Black students. For Latino students I found that aspirations had a smaller effect for Latino students compared to white students for the high school graduation and post-secondary enrollment outcomes.

Finally, analyses investigated cross-level interactions between the school level characteristics and the race indicators. These analyses were designed to determine whether changes in the school level characteristics alter the effect of racial background. For instance, I find that the positive effect for Black students for the 10th grade transition is smaller in public schools. Again, this finding is in contrast to the current literature which suggests that the college advantage for Black students is more pronounced for students of lower SES levels.
In contrast, I found that the positive effect for Black students for the 10th grade transition is stronger for students that are in worse behavioral environments. This pattern would suggest the opposite pattern as the above finding. Concurrent with this finding, I find that Black students advantage in high school graduation is stronger in schools with higher student teacher ratios.

*Race Education and Social Reproduction*

This study expands current knowledge on racial disparities in educational attainment in the United States by focusing on the education careers of Black, Latino, and white students. Modeling educational careers as a series of transitions between grade levels and assessing how particular independent variables affect the probabilities that students make these transitions lead to important discoveries about the processes which lead to broad meso level inequality in educational attainment between racial groups in the Untied States.

The first major finding from this study relates to the finding in the sociological literature of a net college advantage for Black and Latino students. The net college advantage pattern is a relatively recent finding in the educational literature and one that has been typically explained by factors specific to college enrollment. However, this study suggests that scholars interested in the net college advantage pattern should consider how this process plays out across educational careers and that this pattern may not be specific to college enrollment. Findings from this dissertation indicate that a net attainment advantage for Black students is most apparent at early points in their educational careers, at a similar time to when disadvantage overall for Black students is at its lowest point. This finding is interesting in relation to the theoretical models described above that attempt to explain a declining effect of family background on educational attainment. Here the pattern for Black students shows the net positive effect of minority status become smaller as time progresses. When combined with the finding that generally social
background factors do not lose their effects on attainment as students’ age, this pattern indicates the need for theoretical discussions in the sociology of education to take new shape and re-specified to deal with the pattern of family background and racial differences as defining differences at different levels of education. Specifically, scholars might need to determine if for racial minorities, race has direct effects on early educational experiences, whereas later experiences may be shaped more by family background and social psychological factors. Social reproduction models of educational careers which account for these differences may be potentially fruitful ways to better understand both contemporary racial inequality in education and how a pattern of reduced racial inequality in educational attainment in society overall since the mid 20th century have not lead to reduced racial inequality in adult status differences.

Additionally, analyses revealed that social psychological and aspirational factors are important components of the pattern of effects for minority status. Interestingly, I found different patterns with regard to how social psychological characteristics affect the pattern of effects for Black and Latino students. While I found that these variables could explain in part the effects of minority status for Black students at later grade transitions, they did not explain the effects of minority status for earlier grade transitions. I found that for Black students expectations and aspirations had smaller effects for the high school graduation transition and that aspirations had a smaller effect on the 10th grade outcome. For Black students high school graduation the inclusion of aspirational variables helps explain differential completion probabilities and had weaker effects for Black students. The implication of this pattern is that it is Black students’ high aspirations and expectations, within level of family background at this time point that drives in part the net college advantage pattern. Further, if the effect size for aspirations and expectations for Black students was similar to the effect for white students, the college advantage would be even larger than I observe here. Additionally, aspirational variables did not show the same pattern
for Latino students. For Latino students these variables did help explain the pattern of effects for very young students eliminating the advantage in 10th grade enrollment. These measures, did not however, explain the effects at later educational stages. Additionally, and similar to the pattern for Black students I found that aspirations had a smaller effect for Latino students compared to white students for the high school graduation and post-secondary enrollment outcomes. Again this indicates one reason for differences in transition probabilities between white and Latino students in early grades are differences in the levels of aspirational factors, between students with different racial backgrounds.

The second key finding from this study was that the effects of social psychological and aspirational characteristics increase over student educational careers. This finding is an important compliment to the finding described above because it suggests that theoretical explanations of the role that social psychological and aspirational variables play in the production and maintenance of racial inequality should include discussions of how social psychological and aspiration factors may increase in importance as students age. As noted, I find that racial differences in educational transitions are important in early grade levels, this would be the point of student careers in which the effects of aspirational factors would be smaller. It is likely a net advantage in transitions remained at lower levels of education when controlling for aspirational factors because these factors are less influential in early grade levels. However, as students progress and these factors become more important the differences between Black and white students may be explained with by accounting for these differences in aspirational factors. Thus, based on the findings presented here, it appears that aspirational factors are important components of transition differences in later stages of educational careers, but may not matter as much for younger children.

The pattern of increasing effects for social psychological and aspirational factors is important for theoretical discussions of educational inequality. In general this pattern is
consistent with a social reproduction perspective of how these attributes impacts on educational attainment change over time. That is, reproduction perspectives argue that these factors begin to align with likely student outcomes as students age and are a central part of the legitimation of inequality. One key difference that should continue to be investigated is how these attributes change over time within students. The research design pursued here did not allow for this exploration, yet interesting questions could be explored which use strategies that allow for both the causes and consequences of these variables over time to be examined.

Finally, results with regard to school characteristics were less clear. I found a mixed pattern of effects for the school characteristics available for use in the current study. Findings did not clear support or reject the notion that school placements may have effects over time which are not detected in models that look only for contemporaneous school level effects. While I did find some evidence of persistent school effects, I did not find overwhelming evidence in favor of this proposition. This line of research should be explored more in future studies of educational careers. Additionally, if more evidence of this process are found, researchers must attempt to identify the specific mechanisms by which these effects are transmitted across educational careers. Academic handicapping could be one possible mechanism, that is, if students do not gain access to high quality educational programs early on their educational careers, this could begin a process

This research investigated racial differences in educational careers. Focusing on the correlates of academic attainment most often cited in the sociological literature I examined how race, family background characteristics, social psychological and aspirational orientations, and school level characteristics effected the educational attainment of students. This study contributes to the sociological study of racial disparities by examining how these factors shape educational experience throughout student educational careers. While this study produced many
findings about the etiology of racial disparities in the United States, it also produced many questions regarding these issues. Future research should continue to investigate these questions with the goal of better understanding the patterns of educational attainment by race in the 21st century.

Study Limitations

The current research was not without limitations. As in any research project only so many factors can be accounted for and thus, there is a possibility of omitted variable bias. In the current study, I control for most variables known to affect educational attainment in general, yet there are some factors that are specific to particular groups that they deserve mention. For instance, the educational trajectories of women have been shown to be far more influenced by child bearing and marriage decisions than the trajectories of men (Avner and Tienda 2004; Buchman and DiPrete 2006). Thus, the lack of a measure of whether sample members had experienced such an event may have obscured the association observed here between gender and educational attainment. Further, given racial disparities in the chances and timing of marriage and child birth, this oversight could have biased the relationships observed between race, gender and educational outcomes (Buchman and DiPrete 2006). Future research should attempt to account for factors such as marriage and child bearing decisions in an effort to better specify the how the educational trajectories of women from different racial backgrounds vary.

Another factor overlooked in the current investigation is generational status, a factor know to affect the educational trajectories of Latino students (Bohon, Johnson and Gorman 2006). There are distinct differences in language, economic prowess and cultural capital among Latinos of varying generational statuses. These differences could assist in understanding the trajectories of Latino students and what factors are most important for this group. Unfortunately,
the data utilized here did not contain a measure of generational status, and thus I did not account for this potentially important factor. A related limitation of this research was the use of one variable to account for Latino students. Research has shown that different national groups of Latinos have different experiences and the use of one category can obscure very different historical and contemporary experiences between Mexican, Puerto Rican, Cuban and other Latino groups (McDonald 2004; Bohon Johnson and Gorman 2006). Future research should continue to refine measures of Latino nationality. Future research should also expand the study of educational careers to other racial groups such as Asian or Native Americans.

Finally, some of the patterns found in the current research could be due to a process of selection on variables not accounted for in the statistical models presented above. That is, omitted variables that are related to student decisions to continue schooling could bias the current results. As noted above, some authors have applied rational choice assumptions to student decisions about whether to continue schooling suggesting that student decisions are based on rational calculations of the costs and benefits of continued schooling (Cameron and Heckman 1998, 2001; Breen and Jonnson 2000; Lucas 2001 Long 2007). These arguments maintain that selection on unobserved variables can be major flaws in models such as the one presented in this dissertation. While the current study utilized many variables known to be related to educational attainment including a time-varying measure of proficiency, selection on other variables cannot be ruled out. Future researchers should continue to search for innovative measures that could be used to make models more robust to these concerns.
CHAPTER VII

REFERENCES


*Civil Rights Cases*, 109 U.S. 3 (1883).


Dred Scott v. Sandford, 60 U.S. 393 (1856).


Klugman, Joshua. 2003. “School Effects and Allocation Processes: The Effects of High Schools on College Destinations.” Presented at the Annual meeting of the American Sociological Society, August 18, Atlanta, GA.


Robinson, Robert V. and Maurice Garnier. 1985. "Class Reproduction Among Men and


*Sarah C. Roberts vs. The City of Boston* 59 Mass. (5 Cush.) (1850).


