Crossing the Bridge When They Come to It: Race, Meritocracy, and the Pursuit of Success in College and Beyond

Dissertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
Ervin Matthew, M.A.
Graduate Program in Sociology

The Ohio State University
2012

Dissertation Committee:
Douglas B. Downey, Advisor
Randy Hodson
Vincent J. Roscigno
ABSTRACT

In recent times, research has revealed a dynamic shift in the perception of racial inequality in the contemporary United States, with an increased belief that racial discrimination is a concern of a bygone era (Hunt 2007). When they are acknowledged, enduring racial disparities in life chances are often attributed to differences in marketable skills and upheld by some scholars as evidence of a meritocratic system within which minorities are likely to succeed if they are able to overcome early disadvantages and acquire the requisite training and credentials (Neal and Johnson 1996). In this project, I test the argument that equivalence on measures of academic merit – school performance and standardized exam scores -- is sufficient to assure race-blind success at three stages of the status attainment process: college entry, college completion, and wage attainment. I discover that blacks and Hispanics progress through the status attainment process at a slower pace than do whites and Asians. Results show that academic merit strongly predicts racial gaps in timing of college enrollment, has less impact on variance in timing of college completion, and is a weak predictor of early-career income disparities. I find evidence that race actually matters more later in the status attainment process than at earlier points when students are equated on measures of academic success, counter to the assumptions of a meritocracy.
To my family,

My departed colleague Casey,

And every child of the South Bronx who has dreamed of making a difference in the world.
ACKNOWLEDGMENTS

In acknowledgment of the team effort that was necessary to get me to this moment, I extend my sincere thanks to several people who have been integral to my success.

I thank my advisor, Doug Downey, whose mentorship I value greatly and whose belief in my ability to reach the goal I will forever appreciate.

I extend my thanks to my committee members, Randy Hodson and Vinnie Roscigno, who have been excellent sounding boards for my ideas and willing sources of advice throughout my graduate school career, and whose invaluable input helped to shape the trajectory of this project.

My great appreciation goes to my wife, Dominique, who has carried more than her share of the burden as I have focused on completing this journey, and who has been both a dynamic teammate and an affectionate source of support, as well as the best mother to my children that I could ever ask for.

Thank you to my three children, Gabrielle, Nehemiah and Sapphira, the jewels of my heart who have sacrificed many mornings, afternoons and evenings while accompanying me to the office, and who remain my greatest inspirations to strive for greater achievements, even as they offer the balance that reminds me that there is more to being a success in life than earning professional acclaim.
I thank Claudia Buchmann, from whom I learned the research process as a young graduate student and who guided me through several critical stages of my graduate career.

Thank you to Patrice Dickerson, who has directed exceptional financial resources toward my cause and provided me with opportunities that made my path to the doctorate a much easier one.

I am grateful to Ruth Peterson, my “Ohio State mother”, and to both Townsand Price-Spratlen and Korie Edwards for completing the core of our minority support group.

I express my gratitude to Betty Menaghan for providing a shoulder to lean on, a voice of wisdom whenever I needed advice, and an invaluable reviewer of my academic work.

I thank my friends and colleagues at the Ohio State University, graduate students past and present who have walked the path with me over these last seven years and who have become integral parts of my life and my family’s.

Finally, I acknowledge and thank all who have been part of my support team since before I arrived in Bricker Hall in 2005, and who have remained by my side through light and darkness: my parents, Richard and Denise Matthew; my most influential teachers, Robert Schneiderman, Relitia Rudd, Charlie Randall, Arlene Rosenberg, Fred Shannon and Joe Ragins; friends, mentors and supporters Len and Suzanne Kesten; the faculty in the sociology department at Lehman College; and all who enabled me to develop the fortitude that is my signature and the desire to benefit humanity that is my calling.
VITA

15 April 1980.............................. Born – Bronx, NY

2005................................. B.A. *cum laude* in Sociology and Political Science, Herbert H. Lehman College

2007................................. M.A. Sociology, The Ohio State University

2005................................. Form/Huber Graduate Fellow, Department of Sociology, The Ohio State University

2006 – 2011............................ Graduate Teaching Associate, Department of Sociology, The Ohio State University

2011 – 2012............................ Graduate Administrative Associate, Diversity Services Office, College of Arts & Sciences, The Ohio State University

PUBLICATIONS


FIELDS OF STUDY

Major field: Sociology
TABLE OF CONTENTS

Abstract ............................................................................................................................................. ii
Dedication ........................................................................................................................................ iii
Acknowledgments ........................................................................................................................... iv
Vita .................................................................................................................................................... vi
List of Figures ................................................................................................................................... vii
List of Tables ..................................................................................................................................... ix

CHAPTER 1: INTRODUCTION ........................................................................................................... 1
CHAPTER 2: RACE, MERITOCRACY AND SOCIAL STRATIFICATION ......................................... 5
  2.1 Perceptions of a post-racial America ....................................................................................... 5
  2.2 The Merit Equation – education and status attainment in an ideal meritocracy ..................... 11
  2.3 Models of status attainment ................................................................................................... 12
  2.4 Labor market inequality between racial groups – meritocracy or discrimination? ............. 16
  2.5 Elements of this study ............................................................................................................... 23
  2.6 Limitations and implications of this project ........................................................................... 25
CHAPTER 3: GETTING ON TRACK ................................................................................................ 27
  3.1 Abstract: ................................................................................................................................. 27
  3.2 Introduction ............................................................................................................................ 27
  3.3 Data and Methods .................................................................................................................. 35
  3.4 Results .................................................................................................................................... 42
  3.5 Discussion .............................................................................................................................. 45
  3.6 Conclusion ............................................................................................................................. 48
CHAPTER 4: CROSSING THE BRIDGE – RACE, MERITOCRACY, and TIMING OF COLLEGE COMPLETION

4.1 Abstract: .................................................................................................................. 54
4.2 Introduction.................................................................................................................. 54
4.3 Racial disparity in timing college completion ............................................................... 58
4.4 Data and Methods ...................................................................................................... 61
4.5 Results.......................................................................................................................... 71
4.6 Discussion................................................................................................................... 76
4.7 Conclusion................................................................................................................... 79

CHAPTER 5: MAKING THE (PAY) GRADE -- RACIAL VARIANCE IN FINANCIAL PAYOFF TO ACADEMIC SUCCESS

5.1 Abstract: ...................................................................................................................... 87
5.2 Introduction.................................................................................................................. 87
5.3 Racial income disparity – competitive attainment or allocation? ............................... 89
5.4 Data and Methods ...................................................................................................... 97
5.5 Results.......................................................................................................................... 106
5.6 Discussion................................................................................................................... 110
5.7 Conclusion................................................................................................................... 114

CHAPTER 6: DISCUSSION and CONCLUSION

6.1 Diminishing returns to merit, increasing significance of race ..................................... 121
6.2 Black and Hispanic outcomes -- different paths to subordinated status ................... 125
6.3 Timing isn’t everything -- but it matters .................................................................... 126
6.4 Sponsored mobility – explaining the diminishing effect of merit ............................... 127
6.5 CONCLUSION.............................................................................................................. 135

APPENDIX A .................................................................................................................... 146
APPENDIX B .................................................................................................................... 148
LIST OF FIGURES

Figure 1. The Merit Equation modeling of ideal relationships between ascribed status, education and status of destination ................................................................. 11

Figure 2: The Origin-Education-Destination model (reproduced from Birkeland 2006). 14

Figure 3: The Blau & Duncan model of social stratification (Blau & Duncan 1967, reproduced from Birkeland 2006) ............................................................................. 14
LIST OF TABLES

Table 3.1 - Means, standard deviations and descriptions for variables used in analysis: High school seniors from the National Educational Longitudinal Survey of 1988 – 2000 (college-eligible students only)…..51

Table 3.2 – Correlations for all variables in analysis ........................................52

Table 3.3 - Cox regression odds ratios of time between high school completion and college enrollment on race, high school GPA, SAT, SES and sex........53

Table 4.1 - Means, standard deviations and descriptions for variables used in analysis: High school seniors from the National Educational Longitudinal Survey of 1988 – 2000 (college enrollees only).............83

Table 4.2 – Correlations for all variables in analysis ........................................85

Table 4.3 - Cox Odds ratios for Cox regression of years to bachelor’s degree on race, education, institutional characteristics and time to college enrollment..86

Table 5.1 - Means, standard deviations and descriptions for variables used in analysis: High school seniors from the National Educational Longitudinal Survey of 1988 – 2000 (college enrollees only)............116

Table 5.2 – Correlations for all variables in analysis ........................................118

Table 5.3 – OLS regression of income for full-time employees in 1999 on race, SES, gender, credentials, academic merit, academic moderators, occupational factors and timing of college completion.............................119

Table A.1 – Means for academic measures and background factors by race ..........146
Table A.2 – High school grade point average category by race ......................146
Table A.3 – Timing of college enrollment by race and high school GPA ............147

x
CHAPTER 1: INTRODUCTION

Racial inequality in the United States remains a significant social problem in the twenty-first century. Across a wide range of indicators of social success (such as wages, wealth, health, and life expectancy), important racial gaps persist. In decades past, the delineation between the privileged and the subordinate was clear and endorsed openly, both by law and by practice. Segregation and blatantly discriminatory Jim Crow policies made evident the second-class status of racial minorities in America, and racist persecution of blacks that often went unchecked by local law enforcement created an untenable environment with few realistic prospects for upward mobility. In contemporary society, however, the vehicles of racial inequality are not so obvious. Overt denial of employment opportunities, refusal of access to housing, and other recognizable forms of racial discrimination have been illegal for approximately half a century, and attacks on people or property that are inspired by bias carry especially severe penalties under hate crime laws. These changes have led to the belief that racial disadvantage is a relic of a bygone era (Hunt 2007), and that the still-existent racial inequalities that persist today are less the result of discrimination than of market forces that value skill sets and credentials rather than phenotype (Wilson 1978, Neal and Johnson 1996).

Providing the backbone of the meritocracy argument that is central to this dissertation, Davis and Moore (1945) argue that, in our society, social stratification results from highly-talented individuals enjoying earned advantages in exchange for
pursuing the more demanding and important positions in society. They claim that, in order to meet the greater responsibilities of these occupations, candidates for important jobs must sacrifice time and earning potential in exchange for learning skills that qualify them to fill these roles; differential access to financial and social resources upon arrival in the labor market, therefore, is a just reward for these sacrifices rather than a reflection of unwarranted privilege. Applying this theory as an explanation for enduring racial stratification in the United States, Wilson (1978) argues that poor training and lack of education sentences many low-class blacks to perpetual poverty, but that this is the result of impersonal market forces that reward skills they don’t have rather than of racial discrimination. In support of this assertion, Neal and Johnson (1996) explore the role of skill gaps in determining black/white wage inequality and conclude that large skill gaps account for much of the variance in wages between the two racial groups; they argue that the focus of future research on the black/white wage gap should be on impediments to blacks’ acquisitions of marketable skills.

When evaluating the belief that acquirable attributes determine racialized life outcomes in a postracial United States, it is essential to turn a critical eye toward the institution of education. On one hand, no institution in the United States is credited with being as much a vehicle for upward mobility as is this one, given the assumed relationship between academic and occupational success. Conversely, some argue that it is through inequalities in the classroom and in evaluative measures that minorities are denied the preparation that will enable them to take advantage of a de-racialized opportunity structure. These arguments accept as accurate the perspective that, if
inequality in education was somehow to be eradicated, societal inequality would soon follow suit. This latter premise is one that I wish to test by way of investigating the true influence of academic success on future educational and occupational outcomes.

In order to assess the relationship between academic success and social stratification, I conduct three studies:

1) First, I compare students of different racial backgrounds across several levels of standard measures of academic merit (i.e. grade point average and standardized exam scores) and aim to identify and explain racial variance in timeliness of college enrollment after high school completion.

2) Second, I evaluate the importance of academic preparedness for the college success of racial groups; this section examines the predictive power of high school academic success for timing of college completion.

3) Finally, I assess the financial payoffs to education by race, comparing the income levels of whites, blacks, Asians and Hispanics across multiple levels of academic attainment in order to answer the critical question of how within-group and between-group income gaps are impacted by academic credentials.

Davis and Moore (1945) offer a theory of social stratification that is based on the assumption that individuals within society are differentially and uniquely talented, and
that realization of these talents serves as the primary determinant of occupational attainment. Herein are we introduced to the formal promise of educational attainment, which is that it stands as a reflection of talent and motivation, and that, in turn, it delivers to those who seek it the opportunity to attain whatever position they so desire, regardless of status of origin. These studies make a timely and substantial contribution to our assessment of this promise.
This dissertation explores the relationship between academic merit and the status attainment process across racial/ethnic groups. In this chapter, I call attention to a broad and timely public discussion of racial inequality in the American opportunity structure. I then outline the general assumptions of meritocracy and status attainment research and critique meritocratic and non-meritocratic arguments for contemporary racial variance in status attainment. Finally, I introduce the intended contributions of my research and its implications for the debate.

2.1 Perceptions of a post-racial America

Present-day claims about the relationship between race and opportunity structure indicate a growing perception that race is, independent of characteristics that cross racial boundaries (e.g. socioeconomic status or parent's level of educational attainment), no longer a meaningful predictor of racial inequality. Gone is the inhumane institution of slavery that acknowledged as normative the exploitation of black people and the deliberate denial of any reasonable opportunity for members of this group to gain freedom, much less to acquire meaningful status in society. Long outlawed are Jim Crow laws that mandated racial segregation in public institutions in the American south, done in by the landmark 1954 United States Supreme Court Brown vs. the Board of Education ruling and the Civil Rights Act of 1964. In response to laws and practices that denied minorities access to equal opportunities for status attainment and social justice,
Affirmative Action policies now exist that require institutions of higher learning and places of business to structurally guard against denying access to historically disadvantaged minorities, including women and racial minorities. Barack Obama, a man with partly African heritage, was elected president in 2008. In this post-Civil Rights era, many believe that racial discrimination and corresponding structural disadvantages have been effectively muted.

Affirmative Action

Today, many people believe that, given the tangible gains made by racial minorities and the perceived decline in racial inequality in recent decades, diversity initiatives have outlived their usefulness in society. In acknowledgment of the projection that racial inequality in education and, to a lesser degree, in labor market disparities are projected to continue to decrease during the next century (Gamoran 2001), it might be claimed that, if meritocracy has not arrived, it is, at worst, a matter of time until it prevails. In his controversial book, *The End of Racism*, D’Souza (1995) claims that this moment has already arrived, positing that while racial bias still exists, ”it no longer has the power to thwart blacks or any other racial group in achieving their economic, political, and social aspirations.” D’Souza goes on to make the claim that disadvantage today is reserved for those who exhibit cultural characteristics that are incongruent with ideals of proper behavior held by broader society; in short, he argues that the keys to thriving in society are both knowable and accessible to all, and that manifesting desirable characteristics will deliver to any individual the commensurate opportunities and outcomes that are warranted. The historic election of Barack Obama in 2008 as the 44th
President of the United States has been received by many as evidence of just this: Reed and Louis (2009) cite examples of several reactions to news of Obama's victory from anonymous online respondents, political panelists such as former Secretary of Education William Bennett and black celebrities like Will Smith that shared the common theme that blacks had “no more excuses” for not prospering through hard work and dedication.

Going further than the claim that minorities are no longer hindered by racial discrimination, research finds an emerging perception of “reverse racism” -- discrimination against members of a majority group in favor of minorities. The claim that whites are structurally disadvantaged by race-conscious policies is not new (Lionel Lokos argues the same in his 1971 book, *The New Racism: Reverse Discrimination in America*, and *Regents of the University of California v. Bakke* in 1978 provided an early legal challenge to Affirmative Action policies), but this perspective has gained remarkable traction in today’s society. A recent study found that, while both blacks and whites believe that discrimination against blacks has decreased in recent decades, whites actually are likely to believe that anti-white racism is a bigger problem in the United States than anti-black discrimination, a perspective that is predictably alien to blacks (Norton and Sommers 2011). Consistent with the post-racialist ideas that minorities are no longer disadvantaged by their race, public sentiment has shifted in opposition to Affirmative Action. A 2009 Quinnipiac poll found that Americans favored abolishing Affirmative Action policies by a margin of 55-36 percent, which is almost the complete inverse of the 58-33 percent support that Affirmative Action enjoyed in a 2000 Roper Center for Public Opinion poll (UnderstandingPrejudice.org, retrieved 3/30/2012).
Of particular importance, shifting perspectives on the causes of racial inequality inform policies that govern the role of race in access to selective opportunities within public institutions. The United States Supreme Court ruled on two cases involving the University of Michigan in 1993, *Gratz vs. Bollinger* and *Grutter vs. Bollinger* — the result of these rulings was that institutions are not permitted to explicitly disadvantage candidates who are members of any racial category in order to grant opportunities to others, but that racial diversity is a compelling enough national interest that race may be considered alongside other criteria in admission decisions. (At the time of these rulings, the Supreme Court indicated support for sunset provisions in race-based policies and an expectation that such policies should be open to review at future points.) In 1996, California voters approved an amendment to the state constitution through support of Proposition 209, which outlawed the Affirmative Action-based consideration of race in college admissions and access to public employment opportunities in the state.¹ A 2009 Supreme Court case, *Ricci vs. DeStefano*, presented a legal challenge to one application of Affirmative Action in the labor force, resulting in the decision that dismissal of results for a New Haven, Connecticut firefighter exam on the basis of perceived cultural bias against blacks (all but one of the applicants who passed the exam were white and no blacks passed) was a violation of civil rights. In 2012, the Supreme Court will hear arguments in *Fisher vs. University of Texas*, the case of a college applicant who argues that the university’s practice of considering race in the application process wrongfully

¹ Information from University of California -- Irvine Office of Equal Opportunity and Diversity website: http://www.oecd.uci.edu/aa.html
and unconstitutionally led to her being denied admission. The willingness of the Supreme Court to re-engage this argument just one decade after ruling on the similar University of Michigan cases signals that Affirmative Action is at legitimate risk of being deemed no longer legally justifiable.

I caution that celebration of a post-racial opportunity structure must be tempered by a sober assessment of cross-sectional realities of this moment. Despite the advancements made by racial minorities, much ground yet remains to be covered on the road to equality, as disparities in education, occupational prosperity, housing, health and involvement with the criminal justice system remain strongly significant (Reed and Louis 2009), and there is reason to be skeptical that these differences will be resolved in short order. Historically, systematic changes have been sporadic rather than incremental and predictable, and the argument that systematic revisions of recent decades have rendered those who hold racist views impotent is unconvincing because, as with the aforementioned Supreme Court decisions, a subjective appeal process is the best that can be offered to those who have been wronged. Furthermore, the assumption that racial disadvantage necessarily requires deliberately discriminatory action on the part of racial actors is flawed; instead of an inherently equitable social system that, left to function uninterrupted, will yield just results, America’s is a racialized society, one in which race holds power because society is structured to advantage some groups and disadvantage others in ways that require some effort to identify and even more effort to sufficiently reform (Bonilla-Silva 2001).

I reject the narrative that increased tolerance has been the primary driving force behind relatively recent social mobility for minorities and, instead, argue that apparent
progress is best understood through the lens of Raftery and Hout’s (1993) theory of maximally maintained inequality. This thesis posits that increased access to opportunities for underprivileged groups signals not the elimination of barriers, but rather a system’s newfound ability to accommodate more participants, thereby permitting the opportunity structure to be less selective; access to desirable positions is dependent upon the level of demand from within the dominant group relative to number of positions available, not on the ability of subordinate group members to build profiles that are comparable to their superordinate competitors. Applying this perspective to racial inequalities in America, it is clear that while possibilities for prosperity of racial minorities exist to a much greater degree than they did in the past, the probability of advancing to the most coveted posts in society remains higher for whites than for blacks, Hispanics and Asians as individuals, and whites as a group will continue to maintain privileged standing relative to their minority counterparts due to disproportionate concentration of gatekeeping authority within this group.

The truest test of my assertion, as well as of D’Souza’s (1995) argument that valued characteristics determine social position rather than race, begins with a comparative analysis of outcomes for members of different groups who otherwise measure equally on indicators that have been deemed important. I concede that this approach necessarily ignores the fact that race exists in social context, and that several of the factors that will be controlled for have, themselves, been found race-dependent in ways that are not easily explainable. Yet, the advantage of taking this path is that, if we accept these premises, yet inequality persists net of these factors that many insist are the true predictors of success, then the popular refrain -- “It’s not your race, but rather {insert
claimed “neutral” factor here}” -- will be found wanting; conversely, if inequality throughout the status attainment process is explained by these variables, this will mean that proper target(s) of efforts to bring equality to American society will have been identified. It is the goal of this project to shed such light on the true impact of merit on the life chances of people of different races in the United States.

**MERITOCRACY IN THE STATUS ATTAINMENT PROCESS**

<table>
<thead>
<tr>
<th>Status of Origin</th>
<th>Education</th>
<th>Destination Status</th>
</tr>
</thead>
</table>

![Figure 1. The Merit Equation modeling of ideal relationships between ascribed status, education and status of destination](image)

**2.2 The Merit Equation – education and status attainment in an ideal meritocracy**

In an ideal meritocracy, achievement is determined primarily by two individual attributes: talent and motivation. If enough effort is exerted, one should be able to apply one’s ability to its fullest potential and receive commensurate returns. These should be similar for people who have demonstrated comparable talent and degree of effort independent of other individual characteristics.

Within the context of the status attainment process, no institution in the United States is credited with being as much a vehicle for upward mobility as is the institution of
education. Built into American ideology is the belief that hard work and peak performance are the keys to improving future life opportunities, and that academic achievement is our best proxy for the concept of merit. In the best case, academic outcomes – both achievement and, ultimately, attainment – should be weakly related to status of origin. Some correlation between inherited status and academic outcomes is to be expected even if school success is entirely dependent upon variance in cognitive skills, given the positive relationship between parental investment and the development of cognitive abilities (Downey and Gibbs 2010), but grades and exam scores should combine to accurately measure the skills and abilities that members of society have acquired by the end of a given stage of schooling. Furthermore, measured success at one level of academic attainment should permit access to commensurate opportunities at subsequent levels, and success at the next level should be comparable for students with similar academic track records. Finally, the correlation between academic success and early labor market outcomes such as occupational attainment and income should be very strong if early-career candidates are rewarded equally for similar demonstration of talent and motivation.

1.3 Models of status attainment

Education has long been thought to hold a prominent role in the status attainment process, as well as in evaluation of its fairness. When we speak of candidates being comparably qualified for positions, we often refer to earned credentials or some quantifiable measure of academic achievement; claims of enhanced opportunities for
upward mobility of minorities in today’s society typically include some acknowledgment of greater access to institutions of higher education. Beyond this, we measure academic success against the predicted school outcomes for people based upon given characteristics to determine whether they have fulfilled their potential or fallen short of expectations.

There are several reasons why evaluating the impact of academic success on status attainment process is logical. First, in the United States, one’s academic career temporally spans the duration of time between early childhood and entry into the labor force as an adult, making this a critical stage at which to assess the transition between status of origin and destination status. Second, the sanctioned evaluative measures that are requisite for any formal education system purport to capture some combination of motivation and realized talent, such that academic achievement is – for better or worse – quantifiable, and disparities in performance are evident and demand explanation; this enables cross-sectional comparison of outcomes for students whose demographic characteristics differ as well as retroactive analysis of the role of achievement in predicting adult outcomes. Third, successful completion of each stage of the formal schooling process is explicitly measured, and the finishing point of each tier is acknowledged by an additional and (except under egregious circumstances) irrevocable earned credential. Finally, owing to the first three points, the academic career is the earliest and, perhaps, most critical opportunity for members of society to assert individual agency as a determinant of future outcomes.

*The Origin-Education-Destination (OED) model*
Figure 2: The Origin-Education-Destination model (reproduced from Birkelund 2006)

Figure 2 presents the Origin-Education-Destination (OED) model of status attainment, a simplified model that is the basis for several influential studies of social stratification. Theories based on this model assume a relationship between social class of origin, academic attainment and class of destination, as well as the premise that destination status is dependent primarily upon ascribed class status and education (Birkelund 2006).

Blau and Duncan model

Figure 3: The Blau & Duncan model of social stratification (Blau & Duncan 1967, reproduced from Birkelund 2006)
Classical models of status attainment focus on the two primary determinants of social class – education and occupational prosperity. The extent to which education is relevant is often with regard to how it helps to create access to desirable occupations which, ostensibly, are to then allow access to preferred lifestyles. In their landmark *American Occupational Structure* study, Blau and Duncan (1967) (hereafter B-D) identify occupational prestige as the primary measure of social status and set about explaining the relationship between socioeconomic status of origin and occupational prestige. In this study, socioeconomic status is proxied by the academic attainment and occupational prestige of one’s father, with these variables used to predict the occupational standing of a son. Among other key findings is the revelation that socioeconomic status of origin most strongly predicts a son’s occupational attainment by way of influencing his level of education; analysis reveals that a father’s education is a stronger predictor of his son’s academic outcomes than is the father’s occupation.

*The Wisconsin model*

Further developing the B-D model, Sewell et al. (1969) attempt to explain a greater portion of the variance in occupational prestige by introducing several non-structural variables to the analysis. This revision, known as the Wisconsin model because the research was spearheaded by scholars from the University of Wisconsin, adds the cognitive ability and academic achievement of the respondent, as well as social psychological factors such as personal aspirations and peer influence. In this analysis, measures of academic merit are identified for the first time as statistical predictors of occupational success – academic achievement is measured by high school class rank and
standardized exam scores stand as the proxy for cognitive skills. In summary, the Wisconsin model implies that socioeconomic advantages are converted into favorable outcomes via education so long as students are motivated to succeed by the encouragement of parents and teachers or by adopting the ideals of successful role model peers, possess requisite cognitive skills and perform well enough in school to differentiate themselves from their peers. This model makes room for variance in outcomes amongst people who enter the labor force with like credentials by establishing the importance of additional pre-market factors for differentiation of job candidates.

2.4 Labor market inequality between racial groups – meritocracy or discrimination?

OED as a meritocratic process

As earlier indicated, some scholars posit that contemporary racial stratification is the legacy of discriminatory practices of yesteryear that relegated racial minorities to subordinate starting positions relative to their white counterparts. These researchers theorize that differential ability of groups to navigate the status attainment process is accountable for disparate outcomes rather than discriminatory practices. Thus, their arguments are best classified as support for the meritocratic nature of the status attainment process as a bridge between position of origin and position of destination.

The B-D model (and its derivative, the Wisconsin model) partially supports a meritocratic interpretation of status attainment. While it acknowledges the importance of ascribed status and stops well short of attributing variance in occupational attainment
entirely to one’s level of education, the B-D model reveals a powerful correlation between one’s academic success and class destination. Furthermore, B-D shows that the correlation between father’s occupational status and that of his son is fairly weak when measured directly, and that it is through its effect on his son’s education that a father’s academic and occupational prosperity most influences his son’s occupational prestige. A logical deduction from this finding is that socioeconomic status of origin matters most in the quest to acquire the credentials and corresponding marketable skills that make one hirable; if members of subordinate groups are able to acquire the education needed to gain access to desirable jobs, then the impact of ascribed status is blunted.

The contention that SES-dependent skill disparities are accountable for racial inequality in contemporary labor force outcomes is made in William Julius Wilson’s (1978) often-debated *Declining Significance of Race*. Under Wilson’s premise, the living legacy of discrimination in the United States is the present day status of a large percentage of the black population that finds itself part of society’s underclass. In turn, this lower status leads to weaker access to the training and opportunities that make blacks competitive in the labor force. The conclusion is that modern-day racial inequality is no longer the result of discriminatory denial of opportunities, but rather of inability of racial minority communities to compensate for being disenfranchised for so long.

Neal and Johnson (1996) extend this argument in their attempt to explore the bridge between academic success and labor market prosperity. These scholars posit that controlling for such variables as occupation, educational attainment and work experience is problematic because payoffs for these factors necessarily can be influenced by labor market discrimination. Furthermore, they contend that variables that are used as proxies
for premarket abilities overestimate the importance of equalizing on academic attainment, since black students typically achieve at a lower level relative to whites who are in the same grade. Due to these limitations, a legitimate search for the impact of merit or ascribed status should account for early-career variance in outcomes. To address this problem, these scholars aim to more efficiently measure premarket skills and then determine whether disparity in these skills is accountable for racial wage inequality.

Building on literature that identifies income as a critical measure of labor market fairness, Neal and Johnson argue that disparities in the valued skills that job candidates bring to the market – rather than discrimination – are, indeed, primarily accountable for wage variation among racial groups; using scores from the Armed Forces Qualifying Test (AFQT) that is administered to teenagers as they prepare to exit high school as a proxy for these skills, these researchers find that most of the black-white wage gap reflects a gap in these requisite abilities. The same conclusion is drawn by O’Neill (1990), who adds that years of schooling and years of work experience compensate for the remainder of the wage gap. Jencks and Phillips (1998) cite a significantly strengthening relationship between scores on the AFQT and labor market inequality -- as compared to the earlier findings of Cutright (1972) that show a weak relationship between standardized exam performance and white-black wage inequality in the 1960s -- and draw a conclusion similar to those of Neal and Johnson (1996) and O’Neill(1990): if test gaps can be closed, then racial inequality in society will eventually fade into memory.

2 Neal and Johnson (1996) find that AFQT scores explain the entirety of the wage gap between black and white females and approximately 75% of the gap between black and white males.
My critiques of the meritocratic arguments are several. First, the focus on
difference in marketable skills between racial groups tends to assume that employers are
able to gauge these skills at the initial stages of the hiring process and in determining
initial wages, but evidence suggests that measures of academic merit barely register in the
minds of hiring managers (Rosenbaum 2001). Instead, general racialized assumptions
about the career trajectories of employees are more likely to impact wage attainment at
this stage than are abilities that managers only are able to observe and react to after
employees have been in position for some time, as is evidenced in Alon and Haverfeld’s
Second, with the exception of Sewell et al.’s (1969) Wisconsin model, notably absent is
the influence of academic achievement. The benefits of school success are cumulative,
such that the opportunity to acquire new skills and privileges is not afforded to all
students equally at every level of schooling (Carbonaro 2005), so level of achievement
must be accounted for. Beyond this, level of academic attainment must be accounted for,
since the transition for many high school students is no longer straight into the work
force, but rather into an institution of higher education. Applicable skills are assumed by
employers when job candidates show evidence of credentials, but even a highly-skilled
candidate will find himself or herself without chances to apply those skills as readily as
those who hold requisite degrees, and pay scales in some occupations are dependent upon
acquisition of credentials irrespective of skills and work experience. Finally, although
meritocratic models of status attainment show a strong relationship between education
and occupational success, a great degree of variance in labor market outcomes still
remains unaccounted for beyond the influence of education.
Contrary to arguments that status attainment is a meritocratic process, I contend that outcomes in this process are impacted by subjective factors and are, therefore, inherently non-meritocratic. While it is logical that positions of high authority hold benefits that exceed those of lesser rank, access to these positions is not determined merely by objective market forces. Rather, some selection bias influences the process, such that talent is typically searched for primarily amongst favored groups of trainees, leaving other talented individuals undiscovered regardless of whether they are up to the task of filling desirable positions (Tumin 1953). It is this selection bias that creates structural advantages for some groups at the expense of others rather than true differences in applicable talents, as some groups are disproportionately denied the chance to demonstrate competence irrespective of how affiliated individuals perform within their allowed academic space.

In addition to the tendency to consider the capabilities only of students whose groups are advantaged in society, there also have been many instances in which recognized ability has gone unrewarded due to deliberate discrimination. Historically, non-meritocratic influences on outcomes have been easy to identify due to their overt nature. For many decades, blacks were explicitly denied access to opportunities to own businesses, and those who were able to do so could not compete for customers outside of their communities, systematically limiting the ability of blacks to build wealth that could benefit them and their children (Oliver and Shapiro 1995). When competing for jobs in the manual labor market, racial minorities often received substandard wages relative to
whites who were performing the same tasks and soon came to be considered a cheaper work force, drawing the ire of white-led labor unions that discriminated against minorities so as to protect desirable jobs for white union members (Bonacich 1972, Lieberson 1980).

While scholars who make meritocratic arguments about contemporary status attainment widely acknowledge the inequitable treatment of racial minorities described in the abovementioned studies, they tend to frame market discrimination as a matter of past concern that has little bearing on today’s outcomes. Conversely, others find evidence that labor market discrimination is alive and well. At the hiring stage of the process, Pager and Quillian (2005) examine employers’ hiring practices with regard to black and white applicants and discover that, despite employer survey data that imply equitable treatment for applicants who are ex-offenders, employers are more likely to hire white males who have criminal records than black males who do not. Others have found that employers make assumptions about characteristics of applicants based on race regardless of whether evidence exists to support them and that they are likely to then act on those assumptions in hiring decisions (Pager 2003; Roscigno, Garcia and Bobbitt-Zeher 2007).

On the matter of wage discrimination, Cancio, Evans and Maume (1996) analyze data from the Panel Study of Income Dynamics to directly investigate Wilson’s (1980) claim that race is declining as a determinant of earnings and find that the proportion of the racial gap that is unexplained by measured qualifications increased between 1976 and 1985. In direct opposition to meritocratic assertions, Grodsky and Pager (2001) note that wage inequality within occupations in the private sector cannot be explained by individual characteristics, skill demands of a position, nor demographics. More recently,
Coleman (2003) uncovers strong evidence of employer discrimination using data from the Multi-City Study of Urban Inequality Employer Survey; he concludes that the wage gap between black and white workers in the same place of business increases when managers evaluate them similarly, which is especially notable because evaluators who participated also typically are accountable for wage management. In combination, the conclusions drawn from these studies make a strong case for the persistence of an independent race effect on labor market success. In particular, the revelations that earning higher credentials or even possessing skills that employers themselves explicitly value are not sufficient to assure equitable treatment are important findings that speak to the perpetuation of racial discrimination despite our widespread societal insistence that such practices are a thing of the past.

ELEMENTS, LIMITATIONS AND CONTRIBUTIONS OF THIS STUDY

Much attention has been given to the effect of ascribed status on the schooling process. This discussion is fully warranted, given the notable racial and social class disparities in classroom performance, standardized exam scores and acquisition of credentials. Nevertheless, the implicit assumptions that inform this focus on the acquisition of skills and credentials – that racial inequality in destination status is attributable primarily to disparities during the training phase – downplay the possibility that racial sorting may occur at multiple stages of the status attainment process. Furthermore, although well-developed sociology of education and sociology of work literature explore different stages of the status attainment process, these substantive subareas rarely speak to each other in a way that provides a window into the emergence
of the racialized outcomes that we observe in the labor force. Therefore, while each part of this study stands as an independent assessment of a significant transition stage in the process, this dissertation also compares the role of merit in determining the racial order of success as we progress through the status attainment process, bringing together the home-school-to-work progression in a way that reveals the stage of the status attainment process at which race is most salient.

2.5 Elements of this study

This dissertation explores the impact of school prosperity on next-level success in the status attainment process. Ostensibly, the most notable and most immediate payoffs for academic performance are realized at transition points in the process, when one’s prior achievements are most likely to be held up as a legitimate way to decide upon access to future opportunities. I identify the three most critical transition points between the completion of high school and full-time employment: 1) the transition between high school completion and postsecondary enrollment (if ever); 2) the transition between college entry and college completion; and 3) the school-to-work transition.

Race, meritocracy, and timing of college enrollment

The first analytical chapter, “Getting on Track: Timely College Enrollment by Race and Measures of Academic Merit”, focuses on timing and eventuality of postsecondary enrollment. In a post-industrial society, pursuit of postsecondary credentials is no longer an option that can be wisely declined. In generations past, merely
earning a high school diploma and then going to work in a nearby factory was enough to assure a steady paycheck and enough income with which to pursue a middle-class lifestyle. However, with many factories shuttered and jobs relocated to overseas sites, there are few realistic career prospects for people who do not advance beyond high school completion. For this reason, the transition between high school and college enrollment is a critical moment in the status attainment process.

Race, meritocracy, and timing of college completion

This second analysis chapter, “Crossing the Bridge: Race, Meritocracy and Timing of College Completion”, contributes to stratification and education theory by exploring racial variance in timing of college completion once level of high school achievement is accounted for and, further, by identifying the contributing roles of other factors. Both timing and eventuality of college completion are significant outcomes – Taniguchi (2005) notes that delay in college completion leads to diminished lifetime returns to a bachelors degree, and recent data from the Bureau of Labor Statistics indicate a strongly significant difference in unemployment rates and weekly earnings between college graduates and those who have earned college credits but fallen short of earning a bachelor’s degree.

Race, meritocracy, and variance in labor market payoffs of academic credentials

The third and final analytical chapter for this dissertation, “Making the (Pay) Grade: Racial Variance in Labor Market Payoff to Academic Success”, examines the role of academic credentials in determining labor market success. In this section, I evaluate
the relationship between academic success and racial wage disparities by age 26, accounting for individual and occupational factors. This variable measures the early impact of earned credentials and academic merit on occupational prosperity; this time point is a critical one at which to best evaluate the moderating effects of meritocratic variables, since measurements at later points in the career trajectory necessarily are sensitive to occupation-specific -- and, therefore, widely varying -- measures of merit.

2.6 Limitations and implications of this project

My analyses enter the process at the point at which students have completed high school and are prepared to move on from there. A substantial amount has been written about the great deal of racial divergence and inequality that informs the path from school entry through high school graduation, and I intend to remain active in engaging that end of the debate. However, this project aims to assess the argument that ours is a just society in which, if one can make it through the early stages of the status attainment process, equitable rewards are to be expected going forward. The limitation of this approach is that I am not able to follow the path from the early years, when much of the groundwork for racial stratification is laid.

In exchange for forfeiting the ability to observe the impacts of early childhood factors on status attainment in these analyses, I am able to more easily model the assumed best-case scenario for uniform achievement and attainment across races and, in so doing, empirically challenge the widespread assertion that valued characteristics yield colorblind prosperity. Beyond this, the longitudinal structure of this dissertation permits me to map
the respective paths through the status attainment process that are likely for members of
different racial groups, such that I am uniquely positioned to report not only racial
variance in the eventuality of critical transitions in the process, but also the cumulative
impacts of the timing of these transitions on contemporary labor market inequality.

Conclusions drawn from this research will make an important contribution to the
discussion of whether -- as some theorists insist -- most attempts to equalize society
should be directed toward assuring that people from all racial backgrounds can develop
skills that the market values (Neal and Johnson 1996; Jencks and Phillips 1998), or if
much work still needs to be done to bring labor market practices into line with the
societal ideology of meritocracy. In turn, this finding will provide a piece of the puzzle
as we attempt to chart the best course toward equitable outcomes of all sorts for members
of society regardless of race.
CHAPTER 3: GETTING ON TRACK

3.1 Abstract: This article assesses the relationship between race and timing of college enrollment as it varies by SAT performance and across levels of high school academic achievement. I analyze restricted-use data from the National Educational Longitudinal Study of 1988-2000 (NELS:88 – 2000), the most recent completed study from the National Center for Educational Statistics’ (NCES) longitudinal research initiative; this study follows a nationally representative sample of students who are in 8th grade during the base year and, for the most part, graduate high school in 1992. Using Cox regression analysis, I reveal that the overall white advantage over non-Asian racial minorities in both timeliness and eventuality of college enrollment is significantly influenced by both SAT scores and level of academic performance in the classroom, but that the immediacy of enrollment is explained by socioeconomic status rather than by either of the meritocratic variables. Furthermore, I show that, amongst students who do enroll in postsecondary education within the first two years of college eligibility, black students are more likely than those from all other racial groups to begin their postsecondary studies at a 4-year institution at several levels of academic achievement – suggesting a black investment in the academic attainment process that existing research has erroneously cited as lacking – but that both black and Hispanic high-achievers are less likely both to enroll in a timely manner and to begin postsecondary study at a 4-year institution than their white and Asian performance-level peers. This project demonstrates that access to college is most strongly determined by socioeconomic status rather than a race effect, and that measures of merit play an overstated – albeit important – role in this process.

3.2 Introduction

Among academics and policy-makers alike, racial disparities in academic achievement and attainment have long been a major cause of concern (Jencks and Phillips 1998). Since the findings of the landmark Equality of Educational Opportunity
study (Coleman et al. 1966) – also known as the Coleman Report – laid bare the plight of minority education in the United States, questions have abounded about the causes and implications of the achievement gaps that a post-Civil Rights America could no longer ignore. Despite the efforts of policy-makers and educators, the noted gaps remain resilient, fully four decades after the Coleman Report (Gamoran and Long 2007). Notably, racial disparities in academic success emerge at very early points in the academic progressions of students (Tyson 2002) and persist through secondary and tertiary levels of education. Ultimately, these disparities are considered meaningful because they are powerful predictors of labor force outcomes and future socioeconomic status; by inference, equalizing measurable outcomes like standardized test scores and high school grade point average (when course requirements and standards are comparable) should also level these correlated outcomes.

Arguments about the relationship between ascribed status and academic success often assume that ascription makes its primary impact during the quest to earn academic credentials, i.e. some combination of home lifestyle (Lareau 2002), school characteristics (Kozol 1992), teacher investment (Roscigno and Ainsworth-Darnell 1999) and students’ own attitudes and efforts (Mickelson 1990) contribute to racial stratification in academic performance. Relatively less-explored is the question of how inequality persists at the outcome stage – even if grades and exam scores can be brought to balance, members of different racial groups may yet experience disparate payoffs to their academic success. This project examines the assumption of equal payoff to academic performance across races by assessing the predictive power of high school grades and standardized exam scores in determining post-secondary outcomes.
Race and the inequality of payoffs for academic success

One of the most popular explanations for racial disparities in academic performance in the United States has been the oppositional culture argument (Fordham and Ogbu 1986), which claims that racial minority students self-select into low-achieving aggregates because they consider academic achievement to be antithetical to their racial/ethnic identity. One of the foundational premises for this claim is the idea that black and Hispanic students perceive a weaker payoff to academic achievement for themselves than for their white counterparts. This perception is not argued to be irrational, but rather grounded in acknowledgment of the historical inability of those like them to convert school success into commensurate labor force and lifestyle outcomes.

While recent research on attitudes of black students has called into question the assumption that minorities dismiss the importance of education to their futures (see Tyson et al. 2005 and Matthew 2011 for examples), the historical inequality that gives rise to this theory is not in doubt. Lieberson (1980) contrasts the challenges to integrating into the mainstream labor markets in the United States for white immigrants and for blacks and finds that blacks received weak payoffs for educational attainment relative to whites. Building on this, Grodsky and Pager (2001) note that when blacks and whites hold comparable occupations, the existing wage gap between the two racial groups continues to expand even as education gaps between blacks and whites decline, suggesting even a progressively diminishing return to education for blacks as the labor force became more integrated.

The importance of academic success as a factor in societal inequality is widely acknowledged, such that issues such as school funding and teacher evaluation are
foremost topics among policy-makers and elected officials throughout the United States. Yet, a total evaluation of the institution of education is called for at all levels and, just as important, at all relevant transition points. In accepting that imbalances in resources, teacher preparedness and curricula are important determinants of school performance, we must be mindful not to make the logical leap of assuming that solving these inequities would be enough to provide fair opportunities for members of society regardless of race. Indeed, there is much work to be done in the quest to assure college eligibility for students from all backgrounds, but this is but one stage of the process by which education, ostensibly, supersedes ascribed statuses as the ultimate determinant of life opportunities. Rather than assuming that stratification at higher levels of the educational/occupational attainment ladder is not more than the cumulative effect of stratification at lower levels, it is imperative that we also lend voice to the ways in which people who arrive at a transition point with similar accomplishments and credentials may, nevertheless, find themselves meeting different outcomes.

*Timely college enrollment as a critical outcome*

One factor that I argue impacts payoff to education is timeliness of college enrollment. Even in best-case scenarios, in which delayed enrollees complete their degrees in a timely manner, additional time spent in the training phase of one’s career trajectory reduces the maximum earning potential that is commensurate with the degree. Furthermore, as Bozick and DeLuca (2005) note, students who delay enrollment by a year are about 64% less likely to earn 4-year degrees than on-time enrollees, and the negative relationship between delayed enrollment and degree completion is not entirely
explained by socioeconomic standing, prior academic performance, or transition to other important life roles. Thus, delaying college enrollment places students at elevated risk of missing credentials that, in turn, would grant candidates greater access to occupations that require them; if high school completion is now more valuable in our society as a qualifier for college eligibility than as a direct avenue to a middle-class occupation, then a high school diploma (and all that went into acquiring it) is, likewise, diminished.

The heightened importance of post-secondary education as a precursor to labor force entry (Rosenbaum 2001) has led to greater focus on disparities in college enrollment and completion; yet, disparities in timely college enrollment have received relatively little interest (Rowan-Kenyon 2007). This is unfortunate, since between 25-30% of college enrollees over the past two decades have delayed postsecondary enrollment by at least one year. Doyle and Gorbunov (2010) suggest that a meaningful way of decreasing unemployment rates in the contemporary United States is to assure that job-seekers hold both skills and credentials that are valued in a post-industrial society. This is especially meaningful when attempting to sort out career trajectories and life opportunity probabilities for the entire population of college-eligible recent high school graduates in the United States, as Rowan-Kenyon (2007) posits that the characteristics of delayed enrollees mirror neither those of on-time enrollees nor non-enrollees.

The primary reason that non-traditional enrollment is suspected of being a source of inequality is that it is not randomized throughout the population of college-eligible students. Hearn (1992) explores the relationship between increased college enrollment of
racial/ethnic minorities, women and lower-SES students and three types of non-traditional postsecondary enrollment – part-time attendance, delayed enrollment, and enrollment in vocational or for-profit certification programs. The author finds that expected returns to increased access to college for underprivileged populations are muted by disproportionate percentages of each group choosing a non-traditional postsecondary path. On a similar note, Carbonaro, Ellison and Covay (2011) find that the known female advantage in college completion relative to males disappears for females who delay college enrollment.

I have, herein, established multiple reasons to critically evaluate variance in postsecondary enrollment. First, a significant percentage of college-eligible students are delaying entry into postsecondary education, and this proportion has grown over the last few decades, meaning that evaluations of higher education must account for these students. Second, outcomes for students who delay college enrollment do not mirror those of students who enroll immediately after completing high school – delayed enrollees are much less likely to earn a 4-year college degree than are their on-time counterparts and are more likely to receive diminished returns on their degrees even upon completion. Third, the demographic characteristics of delayed enrollees differ from those of both on-time enrollees and non-enrollees, suggesting that time to enrollment may be another contributor to racial/ethnic inequality in academic and labor market success. Given these realities, I posit that this study is both timely and of high importance to the understanding of the interplay between educational attainment and social stratification.
Variance in timely college enrollment – a deeper look at measures of merit

Logically, in aiming to evaluate college enrollment, it is wise to harken back to recognized measures of merit from the high school careers of students. As Jencks and Phillips (1998) point out, the idea of inequality persisting within our society is not, in and of itself, unpalatable to many people; rather, we consider society to be unjust only when equally-accomplished people achieve disparate outcomes. Given that high school is, ostensibly, the proving ground for students who have college aspiration, it is common for laymen and professional evaluators alike to base assessments of the higher education opportunity structure on how well it finds comparable places for equally qualified students. In keeping with this, I posit that there is added value in comparing outcomes for students who are equivalent on both measures of achievement and attainment.

As noted by Alon and Tienda (2007), academic merit is often defined as a combination of course performance and standardized exam scores; other contributors to the college application package (i.e. statements of purpose and recommendation letters) are not without meaning, but are difficult to place a quantifiable value on. Evidence suggests that standardized exam scores are now the primary determinant of admission into select colleges (Buchmann, Roscigno and Condron 2010), and high school grade point averages are perceived as measures for cognitive ability as well as personal characteristics that are thought critical to success in college (Alon and Tienda 2007). Therefore, measures of merit for this project will be high school grade point average (GPA) and standardized exam performance.
There are several risks to focusing so centrally on high school grades and standardized exam scores in attempting to compare only students who are on similar academic footing. Differences in the courses offered or quality of teaching make GPA an imperfect measure, since students might arrive at comparable grades while being differentially prepared for college. Standardized exam scores also fail to equalize based solely on ability, since a known bias exists which benefits students who are able to afford more costly ways of preparing for the exam (Buchmann, Roscigno and Condron 2010). Nevertheless, there are advantages to using these measures. Prior research has found that students who delay enrollment tend to have weaker course grades than their on-time counterparts (Hearn 1992), although findings do not explore how the relationship between achievement and enrollment varies by race. In regards to testing, Jencks and Phillips (1998) posit that when blacks achieve at comparable or better levels relative to whites on standardized exams, measurable inequality is no longer evident in labor force outcomes, a finding that I am interested in evaluating in the context of college enrollment patterns. Therefore, I allow for the assumption that these variables represent what they portend to – level of qualification for postsecondary success – in order to assess how well these accepted measures of merit predict timely college enrollment.

This research introduces a unique approach to assessing academic outcomes across racial lines by merit. An abundance of research finds, for example, that black students underachieve relative to whites, and that this has implications for high school completion, college enrollment and earning of bachelor’s degrees. However, few attempts have been made to compare the effect of academic success on future outcomes
by race and, thus, to determine if the strength of influence for GPA or standardized exams is uniform. Regression analysis attempts to isolate the effects of membership in one racial group or another when GPA or exam performances are held constant at their means, but as Matthew (2011) demonstrates, variance in academic performance sometimes yields disparate effects when comparing racial groups. Furthermore, the assumption of linear effects of school performance on future outcomes may be flawed, since some options that enhance the probability of enrolling in college (such as merit-based scholarships) become available to students only once they exceed designated performance cutoffs.

3.3 Data and Methods

Data

Data used for this analysis are derived from variables in the first (base year) through third (second follow-up) waves of the restricted version of the National Educational Longitudinal Study 1988 – 2000 (NELS:88-2000), a project by the National Center for Education Statistics. The overall survey is a representative sample of students in the United States and consists of approximately 12,140\(^3\) students who were in 8\(^{th}\) grade when the survey began. I limit the sample to students who can be classified under one of four racial categories: White (approximately 8,320 participants), Black (\(n = \sim1,180\)), Hispanic

\[\]

\(^3\) Consistent with terms of data use for NCES restricted data, frequencies are rounded to the nearest 10.
(n = ~1,620) and Asian (n = ~850). In addition, since I am aiming to distill the impacts of the independent variables on timing of college enrollment, I limit my sample only to students who are college-eligible by way of having earned either a high school diploma or a GED; in so doing, I am able to place all students in the analysis on equal footing with regard to credential, which is critical since racial disparities in college eligibility would, a priori, bias my findings in favor of groups that have. Most survey participants were two years removed from high school completion at the time that data for the most recent wave were collected. The data I use are derived from all three waves of the survey, since demographic data are available in the base year and information about high school completion and post-high school developments are contained in the third.

Treatment of data

Due to missing data on SAT scores and high school grade point average, I evaluate the percentage of cases missing on each of these within categories of my primary independent variable, race. I discover that cases are not missing completely at random – black and Hispanic students are more likely than are white and Asian students to lack information for these measures. I assume that scores are missing at random and use multiple imputation to replace them rather than allow these cases to be dropped through listwise deletion, since losing these cases would reduce the statistical power of my models and, in some cases, leave my analysis subject to biased findings if there is something qualitatively different about those who do not have these scores. In exchange for the greater sample size, I assume the risk of biasing estimates in an alternate way due to imputing based on assumed qualities of survey members with like characteristics on
other variables of interest; in order to guard against this, I run five iterations of imputation and then analyze the pooled average of these.

Variables

Table 3.1 displays the names and definitions of variables that represent the important concepts in my analyses. In addition, means and standard deviations for these variables are included in columns to the right. Correlations between these variables are presented in Table 3.2.

Before beginning any analyses, I first set the parameters for inclusion in my sample. I am exploring racial differences in time to postsecondary enrollment among college-eligible students, so I use a recoded version of the variable composite race to limit my sample to the racial categories that I am evaluating. Much contemporary research on academic achievement and attainment gaps focuses specifically on black/white comparisons, but in so doing, scholars fail to assess circumstances and outcomes for a large portion of the college-eligible population. Of even greater concern, whatever influence our research has on policy decisions might erroneously guide policymakers toward solutions that address the black/white gaps, but fail to make major impact (or, even worse, have negative implications) for other racial minority groups. The racial classifications of “white”, “black”, “Hispanic” and “Asian” were selected as meaningful for my analyses; all else were relegated to missing values, both because of low sample sizes that made any potential claims about these groups suspect and the goal of assessing the four major racial classifications in the United States. For these analyses, students
who identified as being members of more than one race are not included. In order to best evaluate differences between these racial groups, I create dummy variables for each.

This study focuses on outcomes among the college-eligible, based on my desire to test the question of whether students of different races but similar academic standing meet similar outcomes in translating academic attainment into college enrollment. In keeping with the suggestion of Rowan-Kenyon (2007), I include both students who have earned a high school diploma and students who have earned a general equivalency degree (GED) as members of the college-eligible sample. Aside from the advantage of having a larger sample size to work with, failure to include GED recipients among the college-eligible relegates them – wrongly – to the status of academic deserters. While a deeper look at the comparability of their outcomes to those of high school graduates is warranted, so, too, is their inclusion as potential college enrollees. Therefore, I construct the variable college eligible and include only cases for which high school completion or earning of a GED is indicated in the data; analysis for this paper evaluates a sample that is temporarily limited to those who are eligible for postsecondary enrollment.

The outcome variable for my analysis is time between high school graduation and postsecondary enrollment due to my interest in timely college enrollment. This is a continuous variable with values ranging from 0 through approximately 9 years, spanning the duration of the study. Since one of the possibilities for college-eligible students is no enrollment by completion of the survey, I do not want to lose these cases by allowing them to remain in the missing data category in which they were initially placed. Therefore, I identify legitimate skips (defined as students who were college-eligible but
had not yet enrolled) and recode them as “15 years”, which is beyond the sensitivity of my 10-year time series threshold but allows these cases to be counted in survival analysis; I restore these cases to the “missing” category when analyzing descriptive statistics for my variables so that this arbitrary value does not upwardly bias group means.

In addition to the primary outcome variable, I construct the variable *timely enrollment* from the original time-to-enrollment variable; this variable is used as the status variable in my survival analysis. While Bozick and DeLuca (2005) established a seven-month duration beyond earning of credentials to be their threshold for timely enrollment in college, I believe that one calendar year is a more useful mark. This allows for evaluation of time to enrollment inclusive of students who earned eligibility by non-traditional means. A student may, for example, realize that he or she is not on pace to graduate, enter an alternative program in the fall of one’s senior year, and emerge with GED in hand by December, in which case he or she would have to begin college during summer in order to fit into Bozick and DeLuca’s definition of a timely enrollee. Furthermore, a primary finding of these scholars is that delaying college entry by one year decreases the probability of earning a bachelor’s degree by a significant degree. Given this justification, I classify college-eligible student enrollment as fitting one of three categories: “within 1 year of graduating HS”, “more than 1 year after graduating HS”, and “not yet enrolled”. For students who earn a GED, their completion date is treated as their date of HS graduation.
One of the two major moderating variables included in my models is *high school GPA*. This continuous variable quantifies high school academic performance on a traditional scale of 0.00 through 4.00; this dataset includes data for students with a GPA of 0.50 and above, so the true parameters for this sample are between 0.50 and 4.00. For my analyses, a categorical version of the GPA variable is preferable to the private data’s continuous variable because it allows me to identify racial variance in time to postsecondary enrollment within levels of academic achievement rather than only when each racial group’s academic performances are held constant at their means. In addition, categorical treatment of GPA enables direct comparison between levels of performance so that the true effect of GPA on college enrollment is more easily illustrated. For this reason, I recode this variable into four categories for use in some of my analyses, consistent with GPA conversions for letter grades on a A through F scale that allows for partial grades (e.g. C+ or B-): “A”, comprised of students with GPA of 3.33 through 4.00; “B”, which consists of students with GPA from 2.68 through 3.32; “C” for students with GPA of 2.00 through 2.67; and “D or F” for students with GPA that is equal to or less than 1.99. Note that the “A” category begins with a GPA that translates into a B+ average rather than an A-, but that this is also a starting point for consideration for honors at various levels of education, indicating that students who achieve at this level are considered high-achievers; I choose this number to be consistent with this perception.

The second primary moderating variable in this analysis is standardized exam scores. This concept is represented by *SAT/ACT equated*. This measure is a continuous standardized test composite that rescales ACT exam scores to fit an SAT scale, which
allows for a uniform assessment of students’ performances on the two college admission exams in the United States.

**Modeling strategy**

The outcome of interest for this project is time to postsecondary enrollment among the college-eligible, so survival analysis is appropriate to assess this. My primary findings are derived from 9 models of Cox regression analyses. Based on preliminary 3-way crosstab analyses (shown in Table A.3), I suspect that the influence of GPA on the dependent variable is nonlinear, which Cox regression is suited to manage because the resulting hazard ratios do not assume linear effects on independent variables. Furthermore, this survival analysis is ideal for measuring the effects of multiple variables on risk of transition to a new status over time. Model 1 compares time to college enrollment by race, with whites as the reference category. In Model 2, I show the effect that GPA has on the relationship between race and postsecondary enrollment timing. Model 3 measures the impact of the second measure of merit – standardized exam scores – on racial variance in enrollment. The fourth model estimates the combined effects of GPA and exam performance on racial disparities in timing of postsecondary enrollment. Models 5 and 6 measure the impact of ascribed status by way of introducing socioeconomic status and biological sex into the equation. Model 7 re-examines the influence of grades on timing of enrollment when SES and sex are controlled for, and
Model 8 does likewise for the effect of SAT scores. Finally, Model 9 regresses all independent variables on time to postsecondary enrollment.

### 3.4 Results

Table 3.3 presents the results of my Cox regression analyses. In acknowledgment of the fact that included independent variables are measured on different scales, I present the odds ratios for each variable in my models so that these standardized coefficients may be easily compared to determine the relative influence of a one-unit change in each variable.

Model 1 is the unadjusted model that shows variance in the timing of postsecondary enrollment by race. White students are the reference category to which blacks, Hispanics and Asians are compared. In support of Hearn’s (1992) findings, results indicate that black and Hispanic students are significantly more likely to delay college enrollment than are their white counterparts. Asians are 50% more likely to enroll in college in a timely manner than are whites, a finding which is also statistically significant.

When GPA is introduced in Model 2, the relationship between respondent’s race and timing of college enrollment shifts notably. Relative to whites, Asians are still more likely to enroll in college first, but their advantage slips by more than 6%. Conversely, the other two racial minority groups gain significantly on whites, with Hispanics being only 7% likely to enroll later than whites and blacks reducing the gap to a level of statistical insignificance, being only 3% less likely to enroll on time than their white counterparts. With regard to the overall sample, I find an enrollment advantage of 24%
for students who have a high school GPA in the B range relative to those who perform at a C level, and highest-achieving students are 41% more timely in enrollment. On the other hand, low-achieving students (those with GPAs in the range of D to F) have a 35% lower probability of enrolling immediately than do C students.

Moving toward exploration of the second identified measure of academic merit, Model 3 shows the influence of standardized exam success on racial disparities in timely enrollment. As is the case with high school grades, I find that Asians enjoy an enrollment advantage over whites when this measure of academic success is adjusted for, while the standardized coefficients for blacks and Hispanics are virtually identical. Hispanics are found to experience 6% longer delay in college enrollment than whites when exam scores are controlled for, a weak significant effect, whereas the comparable 5% disadvantage for blacks fails to meet statistical significance. Overall, SAT scores have a weaker impact on timing of enrollment than might be expected, with its coefficient suggesting an enrollment timing advantage of about 10% for every 100 point difference for this measure that is treated as highly critical in the admissions process.

The meritocratic argument rests on the premise that academic achievement is the primary determinant of next-level success, an argument that is tested in Model 4. Without accounting for ascribed characteristics, grades and standardized scores should explain the persistence of racial gaps on measures of success at subsequent points in the status attainment trajectory. Here, I find some support for this position, as the white advantage over blacks and Hispanics falls short of statistical significance. However, the
Asian advantage relative to all other racial groups remains powerful, as they maintain a 41% greater likelihood of timely enrollment than whites.

Having evaluated the independent effects of academic achievement variables, I next test the impacts of ascribed variables that are known to have significant effects on college enrollment. Model 5 illustrates variance in enrollment timing by race when socioeconomic status is controlled for. Once SES is equated, the rank order of timely enrollment by racial group is altered notably. Both black and Hispanic students join Asians in holding enrollment advantages relative to whites, albeit with the black/white difference falling short of statistical significance. The gain for Hispanics is particularly large relative to the base model, with what was almost a 10% deficit in timing of college enrollment becoming a 15% advantage relative to whites. Whites actually gain on Asians with SES included, as the Asian advantage in timing of enrollment is diminished by approximately 13% relative to the base model. The independent effect of socioeconomic status is powerful, with increase in SES predicting almost a 62% greater likelihood of timely enrollment. The inclusion of biological sex as an ascribed variable in Model 6 yields coefficients that virtually mirror those in Model 5.

Whites lag behind the other racial groups to a significant degree when both grades and ascribed characteristics are controlled for (Model 7). While accounting for grades reduces the Asian advantage over whites relative to Model 6, controlling for the GPA advantage that whites have over blacks Hispanics net of ascribed characteristics increases the enrollment advantages of both non-Asian minority groups. The likelihood of college enrollment for B- and A-level students relative to those with GPAs in the C range is still
great, but both of these coefficients are reduced once ascribed characteristics are accounted for, implying that at least some of the advantage that students with higher GPAs have over those with lower grades is the fact that grades are strongly correlated with social class.

The inclusion of ascribed characteristics drives the effect of standardized exam performance on enrollment variance to a great degree in Model 8 when compared to its influence in Model 3. Instead of a 6% lower likelihood of timely enrollment for blacks relative to whites, a 10% black advantage emerges; likewise, the standardized coefficient for Hispanics also shifts dramatically when compared to whites who are of like SES, from a deficit of about 7% to a 15% more immediate enrollment rate.

When all independent variables are included in one model, we see a sharp reversal of some of the findings of the unadjusted model. Rather than whites holding advantages in timeliness of enrollment relative to blacks and Hispanics, black and Hispanic students join Asians in experiencing significantly shorter delays in college entry than do whites when GPA, standardized exams and ascribed are controlled for (Model 9). Notable is the fact that the coefficient for SAT is approximately equivalent in the overall model to its strength of influence in all other models, which is not surprising due to the extremely high regard in which these exams are held by both college applicants and the schools who evaluate their profiles.

3.5 Discussion

Race, class and meritocracy in postsecondary enrollment
Through my analysis, I find evidence that the racial order of college enrollment disparity leans in favor of whites and Asians – and against blacks and Hispanics – when accounting only for measures of academic merit. While the deficits faced by blacks and Hispanics are not statistically generalizable beyond this sample when grades and test scores are considered in combination, neither measure of merit is enough to, of its own accord, explain the variance in timing of postsecondary enrollment. Conversely, socioeconomic status of one’s family during the senior year of high school has a mighty effect on the outcome variable, unilaterally reversing the direction of advantage for both blacks and Hispanics relative to white students. This implies that financial means, rather than ability, still is the primary driving force behind college entry in the 1990s.

While social class is the strongest determinant of college enrollment in my models, academic prowess is, yet, of notable consequence. Equating on GPA reduces the black/white probability deficit to statistical insignificance in Model 2 and decreases the white/Hispanic gap by approximately 5%. This stops well short of representing classroom performance as a vehicle for neutralizing the advantages of ascribed status, but it does reveal that black and Hispanic students are similarly as likely as their white counterparts to enroll in college when they perform as well in school, even before socioeconomic disparities are accounted for. Similarly, the leveling of SAT scores results in the white enrollment advantage over both blacks and Hispanics losing significance while reducing the white deficit relative to Asians by approximately 7%. The stronger explanatory power of the standardized exam compared to GPA is not surprising, given the great value placed on standardized exam performance in the
admissions process and the implied intent – by way of preparing for and taking the exam – of pursuing a college education. As expected, time to enrollment decreases as GPA increases for the overall sample as well as within each racial group, but this decline plateaus for non-Asian minorities at the highest level of achievement (Table A.3), suggesting that there may be a threshold beyond which academic performance is unable to advance the cause of timely enrollment for racial minorities.

Overall, these findings indicate that racial variance in timing of college enrollment is very much a function of social class disparity, and that this inequality is only partially captured by accounting for the effect of SES on grades. (The coefficient for SES is modestly reduced in the models that examine it alongside GPA as well as in combination with SAT scores.) Since black and Hispanic students stand significantly worse than their white and Asian counterparts in terms of social class (Table A.2), their outcomes relative to their better-off counterparts are correspondingly weak. Nevertheless, a high percentage of the sample chooses to attempt some level of postsecondary enrollment regardless of high school GPA. This is encouraging, since SES is therefore revealed to function more as a cause for delay or as impetus for other decisions such as level of enrollment (full-time vs. part-time) than as an impediment to enrollment overall, net of variance on measures of meritocracy. Indeed, among low-achievers, blacks and Hispanics actually outpace whites in eventuality of postsecondary enrollment and run virtually parallel at mid-levels of GPA as all of these groups lag equally behind Asians. The significantly greater likelihood of timely college enrollment enjoyed by non-Asian minority groups relative to whites emerges only once SES is
controlled for, but this advantage nevertheless indicates an investment in education that has been argued as lacking in research on racial gaps in school performance (e.g. Fordham and Ogbu 1986). In other terms, black and Hispanic students consider post-high school credentials to be desirable enough to pursue them, and they do so to the degree that their financial means permit.

Less reason for optimism is the revelation that timing of college enrollment varies greatly between white students and non-Asian minorities when these students emerge from high school with elite academic standing (Table A.3). Given Bozick and DeLuca’s (2005) finding that delayed enrollees are less than half as likely to earn bachelor’s degrees as on-time enrollees, this means that blacks and Hispanics who achieve at a high level in secondary school are still less likely to convert this credential and the accompanying high school success into a college degree. This is especially alarming in light of the fact that these students represent the vanguard of their respective racial groups, and that accommodations for high-achieving minorities have become institutionalized so as to give these students a better chance to succeed; theirs is the best-case scenario for their respective racial groups, and even that is substandard relative to whites and Asians.

3.6 Conclusion

A primary takeaway point from this analysis is that racial variance in timing of college enrollment reflects the impact of ascribed status more strongly than it does
variance in academic performance. However, the shorter time to enrollment for whites relative to non-Asian minorities is explained entirely by differences in socioeconomic status rather than unmeasured inequality or racial discrimination; at this stage of the status attainment process, we are observing a class effect rather than a race effect.

A second meaningful discovery is that the college-going population in the United States is not only racially diverse, but also diverse in terms of success histories (and, ostensibly, accompanying predictive skills) that students bring to campus with them. More than 40 percent of white students in the sample achieve at an above-average level, whereas barely one quarter of blacks and Hispanics perform at this level (Table A.2); nevertheless, postsecondary enrollment is high across both race and levels of GPA. Not surprisingly, there is a clear racial order in mean level of high school performance amongst students who enroll in college in a timely manner, and the implications of this for college performance and completion must be explored deeply.

Given the empirical evidence uncovered here that variance in timely enrollment exists when measured by SAT scores and across levels of GPA, closer investigation of explanatory factors beyond SES is also called for. The within-group benefit of improving level of achievement is obvious and supports the popular attention paid to decreasing achievement gaps in schools, but it is apparent that improved performance alone is not sufficient for bringing college enrollment patterns across races to balance, since black and Hispanic students peak at approximately 85% enrollment among students with GPA of 2.67 or higher (Table A.3). Evident, too, is the reality that policy decisions that might be taken to address the disparities highlighted in this paper had best consider the unique
characteristics of the diverse racial and ethnic groups that comprise the college-eligible youth in the United States and be mindful of the fact that solutions that might address the academic shortcomings of blacks relative to whites and Asians may meet with less success if applied as a remedy for Hispanic disadvantage.

There is much ground left to cover in building critical understanding of the factors that inform academic – and, ultimately, occupational – attainment inequality in American society. In pursuit of these answers, the evidence provided here supports my contention that we must take a look at college enrollment timing as one avenue through which racial inequality manifests and perpetuates.
<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Metric</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Timely enrollment</strong></td>
<td>Number of years between high school completion/exit and the respondent’s first enrollment at their first “real” postsecondary institution</td>
<td>Low = 0 High = 8.59</td>
<td>.68</td>
<td>1.19</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td>Categorical classification of self-reported grades in all academic courses taken in high school</td>
<td>(1 = \text{D or F (0.50} – 1.99) (4 = \text{A (3.33} – 4.00)</td>
<td>2.44</td>
<td>.98</td>
</tr>
<tr>
<td><strong>SAT/ACT scores equated</strong></td>
<td>Ordinal composite of SAT scores and ACT scores that have been fit to an SAT scale</td>
<td>Low = 410 High = 1539</td>
<td>885.46</td>
<td>232.88</td>
</tr>
<tr>
<td><strong>Socioeconomic status</strong></td>
<td>Continuous measure constructed from parent survey that incorporates father's education level, mother's education level, father's occupation, mother's occupation, and family income</td>
<td>Scale: -3.09 – 2.75</td>
<td>.01</td>
<td>.79</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>Dummy variable constructed from recoding of F4SEX.</td>
<td>0 = male 1 = female</td>
<td>.52</td>
<td>.50</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no 1 = yes</td>
<td>.70</td>
<td>.46</td>
</tr>
<tr>
<td>White</td>
<td>.09</td>
<td>.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>.13</td>
<td>.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>.07</td>
<td>.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>.07</td>
<td>.26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.1: Means, standard deviations and descriptions for variables used in analysis: High school seniors from National Educational Longitudinal Survey of 1988 – 2000 (college-eligible)
Table 3.2: Correlations for variables in analysis

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Black</td>
<td>-.498</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Hispanic</td>
<td>-.588</td>
<td>-.131</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Asian</td>
<td>-.418</td>
<td>-.091</td>
<td>-.110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>SES</td>
<td>.226</td>
<td>-.140</td>
<td>-.253</td>
<td>.091</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Sex (female=1)</td>
<td>-.016</td>
<td>.019</td>
<td>.012</td>
<td>-.008</td>
<td>-.047</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>High school GPA (categorical)</td>
<td>.075</td>
<td>-.109</td>
<td>-.072</td>
<td>.089</td>
<td>.245</td>
<td>.079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>SAT/ACT score</td>
<td>.088</td>
<td>-.114</td>
<td>-.089</td>
<td>.092</td>
<td>.311</td>
<td>-.031</td>
<td>.531</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time between HS grad and college enrollment</td>
<td>.001</td>
<td>.043</td>
<td>.039</td>
<td>-.097</td>
<td>-.364</td>
<td>-.062</td>
<td>-.246</td>
<td>-.186</td>
</tr>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
<td>Model 4</td>
<td>Model 5</td>
<td>Model 6</td>
<td>Model 7</td>
<td>Model 8</td>
<td>Model 9</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>Exp(B)</td>
<td>Exp(B)</td>
<td>Exp(B)</td>
<td>Exp(B)</td>
<td>Exp(B)</td>
<td>Exp(B)</td>
<td>Exp(B)</td>
<td>Exp(B)</td>
<td>Exp(B)</td>
</tr>
<tr>
<td><strong>Race (reference = White)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.894**</td>
<td>0.969</td>
<td>0.947</td>
<td>0.985</td>
<td>1.075</td>
<td>1.071</td>
<td>1.129**</td>
<td>1.099*</td>
<td>1.131**</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.898**</td>
<td>0.933*</td>
<td>0.931*</td>
<td>0.944</td>
<td>1.151***</td>
<td>1.149***</td>
<td>1.164***</td>
<td>1.155***</td>
<td>1.165***</td>
</tr>
<tr>
<td><strong>Ascribed characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex (female=1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HS grades (reference = HS GPA: C)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS GPA: A</td>
<td>1.410***</td>
<td>1.313***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS GPA: B</td>
<td>1.274***</td>
<td>1.234***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS GPA: D or F</td>
<td>0.646***</td>
<td>0.683***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Standardized exam scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAT/ACT equated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.001***</td>
<td>1.000***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.3: Odds ratios for Cox regression of time between high school completion and college enrollment on race, high school GPA, SAT, SES and sex
CHAPTER 4: CROSSING THE BRIDGE – RACE, MERITOCRACY, and TIMING OF COLLEGE COMPLETION

4.1 Abstract: This article examines the relationship between academic merit and racial variance in time between college enrollment and completion of graduation requirements. In this paper, I analyze data from NELS:88 – 2000 using survival analysis to show that white students are more likely to complete college in an expedient manner than are blacks and Hispanics when enrolled in similar schools, and that this variance is only partly explained by college preparedness as proxied by high school grades and standardized exam scores. Findings indicate that these gaps are further reduced after controlling for level of high school academic rigor, school urbanicity, public vs. private status and timeliness of postsecondary enrollment, but they do not disappear entirely. Overall, the results of this study suggest that race – net of prior academic success or ascribed characteristics – continues to have a meaningful effect on time to college completion.

4.2 Introduction

Among the most-cited reasons for persistent racial inequality in socioeconomic status (hereafter SES) in the United States is disparity in college completion rates of racial minorities relative to whites. The general importance of earning a bachelor’s degree continues to grow in post-industrial America, as the transformation of our national economy has made less viable the option of seeking employment with only a high school diploma in hand. According to recent statistics, the unemployment rate for job-seeking Americans who hold only a high school diploma is 9.4 percent, which almost doubles the 4.9 percent unemployment rate for holders of bachelor’s degrees, and college graduates earn a median of more than $400 per week more than high school graduates who never
attended college (Bureau of Labor Statistics 2012). These numbers suggest grim prospects for closing existing employment and income gaps between racial groups unless the average levels of academic attainment for blacks and Hispanics -- whose academic outcomes lag behind those of whites and Asians -- improve.

In response to the shifting economic landscape in the United States, many efforts have been made to improve access to postsecondary education for high school graduates regardless of ascribed characteristics. However, greater prospects for a college education alone do not guarantee a better future for today’s Americans, as many students struggle to complete their programs of study and fall short of college completion (Light and Strayer 2000). This is unfortunate, because data indicate that there is not much of a difference in employment and earning prospects for people who enroll in college and come away with no degree compared to those who never attend – the unemployment rate is only .7 percent lower for people who exit college without earning a credential than for those who enter the labor force immediately after earning a high school diploma, and median earnings for the former group exceed those of high school graduates by less than $100 per week (Bureau of Labor Statistics 2012). The takeaway point from this is clear: in order to receive true benefit from going to college, one must earn a bachelor’s degree.

*Timing of college completion as a critical outcome*

In addition to the clear advantage that enrollees who earn college degrees have over those who do not, timing of college completion also has meaningful impact on labor market
outcomes. Even if college-goers ultimately complete their degrees, those who graduate in a timely manner receive a higher financial return on their credentials than do delayed graduates. This diminished payoff is due, in part, to the fact that those who make later transitions to the career track have fewer wage-earning years between the start of their careers and retirement than do those who graduate in a timely manner, assuming immediate employment (Taniguchi 2005). In addition, delayed completion means that graduates may find themselves managing other life transitions (e.g. marriage or birth of a child) earlier in their occupational careers than are comparably qualified people who are “on time” in their life course; these concurrent events may impact the amount of time that can be committed to career advancement or influence the selectivity of one’s job search due to having to accommodate the needs of a partner or children. Lastly, delayed enrollees may meet with structural barriers to career mobility as a result of still-existing and often-overlooked forms of age discrimination (Neumark 2009) that could impact lifetime earnings and occupational enjoyment independent of self-determined career decisions. The ramifications of delayed graduation are becoming more consequential in the United States, where Astin and Oseguera (2005) report that fewer students were completing college in four years by 2000 than were doing so in the decade prior.

Beyond the potential labor market disadvantage of completing college at a later date relative to one’s age cohort, an extended college career runs the risk of turning into a seemingly indefinite pursuit of a college degree or a decision against completion altogether. Jacobs and King (2002) report that such external influences as marital, parental and occupational status may influence the ability of older students to complete
college degrees, although a major mitigating factor is the tendency of older students to enroll part-time while students who are younger than 25 years old are typically enrolled full-time; unclear from this study is whether there are qualitative differences between the students who have experienced an interruption in their college careers and those who have persisted as full-time students throughout.

In addition to the detriments of extended time to degree for students, the cost to institutions of higher education is also greater when enrollees take longer to earn their degrees than is standard. Bowen, Chingos and McPherson (2009) point out that, although schools receive more tuition dollars from students who take longer to graduate than from those who complete their studies in a timely manner, this extra revenue does not offset the actual cost of providing an undergraduate education to students, and the remainder of the costs must be absorbed by tax-payers at public institutions.

Studying the relationship between academic success and timing of college completion is also important because -- as is the case with timing of college enrollment that is discussed in Chapter 3 -- prior research has found that there are qualitative differences between college-goers who drop out permanently, those who graduate on schedule and students who experience delayed college completion (Eckland 1964). Furthermore, Bayer (1968) finds that ability factors that predict college graduation -- such as sophistication of vocabulary and math aptitude -- do correlate with time to degree, but notes both that these relationships are relatively weak and that other variables that impact likelihood of college exit are not explanatory for delayed completion; this means that even studying reasons that students fail to complete college in general does
not necessarily lead us to understand why students experience delays, and that this phenomenon must be studied independently.

In this article, I posit that accounting for measures of academic merit will have a minor impact on discovered racial gaps in timing of college completion, counter to assumptions of an ideal meritocracy. Furthermore, I show that the predictive power of demonstrated academic prowess decreases when assumed mitigating factors are included in the equation, but that while racial gaps follow suit, they do not disappear entirely. Finally, I provide evidence that factors that influence racial gaps in timing of academic attainment do not uniformly affect differences between some groups more strongly than others.

4.3 Racial disparity in timing college completion

An examination of college completion rates reveals a distinct race effect, with one recent study finding that 60% of white enrollees graduate within six years, as compared to 49% of Hispanics and 40% of blacks (Chronicle of Higher Education 2010). While many may argue that the overall completion rate falls short of ideal standards, there is no question that the particularly low success rate of blacks and Hispanics is a unique cause for concern. Racial gaps in labor market success have been attributed, in part, to variance in earned credentials, making the narrowing of the graduation rate gaps between whites and minorities a high priority among policymakers and advocates for racial equality.
The role of academic merit

Much of the attention paid toward racial variance in college success is trained on the importance of college preparation. In sociological literature, college preparation is typically regarded as academic ability as measured by high school grades and, especially, by standardized exam scores (Deil-Amen and Turley 2007). These measures of achievement hold hallowed position as the operational indicators of academic merit and form the primary criteria on which college admissions are based. Indeed, formula-based admission processes that rely on these measures have been defended by both public and private universities as a just way to determine access to their institutions because they exclude known biased factors such as high school reputation and family background (Zink 1997).

Researchers acknowledge that there is validity in considering academic performance and standardized test scores as important predictors of college prosperity. Temple and Polk (1986) find that a weak academic record prior to college entry makes one more likely to fall short of college completion, although a strong academic record does not guarantee college success. Stampf and Stanley (2002) assert that SAT scores tend to be good predictors of whether students graduate from the same institution that admitted them as freshmen, but that the predictive power of high school grades and standardized exam scores varies based on whether admitted students scored rank well on both measures or are lacking in one while strong in the other (as most colleges do not admit students who rank poorly on both measures of academic merit).
Despite the aforementioned research that shows the importance of early-career academic achievement for college success, there is ample reason to be skeptical of the assertion that academic merit explains racial gaps in timing of college graduation. First, unfortunately, although black and Hispanic students have made progress relative to whites and Asians in recent decades, wide racial gaps yet remain in high school achievement and standardized exam scores (Kao and Thompson 2003); therefore, supposedly objective merit-based admission practices, which are strongly correlated with socioeconomic advantage and other forms of privilege, serve to perpetuate the racial inequality that they purport to resolve. Furthermore, these measures of merit fall short of strongly predicting early success in college, although high school grades are preferable as a predictor, counter to the assumptions of a higher education system that is increasingly reliant on standardized exam scores when evaluating undergraduate applicants (Alon and Tienda 2007). Finally, the predictive power of high school grades and standardized performance for college prosperity varies by race, as high school GPA is a better predictor of success than are standardized scores for minority students (Hoffman and Lowitzki 2005).

In order to better estimate the true impact of high school academic success on racial gaps in timing of college completion, I examine several pre-college factors that potentially moderate this relationship. First, I investigate the impact of other ascribed characteristics, namely sex and SES, on the relationship between merit and my dependent variable, since these factors are known to exert powerful influence on academic outcomes. Second, I consider the effects of several high school characteristics that have
been found theoretically important in the literature: school urbanicity, public vs. private school status, and academic rigor of one’s school. Finally, in order to test the claims made in Chapter 3 about the long-term effect of delaying college entry, I evaluate the impact of delaying postsecondary enrollment by more than one year.

I forward several theoretical predictions about the effects of my moderating concepts. With regard to ascribed status, known female advantages in college enrollment and completion (Buchmann and DiPrete 2006) will be reflected in my findings, but the race gaps will be virtually unmoved; SES will have a mighty impact on timing of college completion, and racial variance in SES will lead to the narrowing of racial gaps once this factor is controlled for, but a race effect will still be evident. When measuring the effects of school characteristics, I hypothesize that characteristics that have empirically been discovered as favorable -- namely suburban location, high academic rigor and privately-funded institution -- will reduce the racial gaps in timing of college completion. Finally, timing of college enrollment will also be a very strong predictor of timing of college completion, and this variable will also reduce the racial gap in duration of college careers.

4.4 Data and Methods

Data

Data used for this analysis are derived from variables in the first (base year) through fifth (fourth follow-up) waves of the restricted version of the Educational Longitudinal Study 1988 – 2000 (NELS:88-2000), a project by the National Center for Education Statistics.
The overall survey is a representative sample of students in the United States and consists of approximately 12,140 students who were in 8th grade when the survey began. I limit the sample to students who can be classified under one of four racial categories: White (approximately 8,320 participants), Black (n = ~1,180), Hispanic (n = ~1,620) and Asian (n = ~850). At the time of the final survey, most participants were approximately eight years removed from the end of their high school careers and a heavy majority had attempted postsecondary education at some level. The data I use are derived primarily from the third wave, released in 1992, which reports ascribed characteristics, achievement data and high school characteristics from the fourth year of high school. The exception to this is the dependent variable, time to college completion, which is found in the final wave of the study.

*Treatment of data*

Due to missing data on SAT scores and high school grade point average, I evaluate the percentage of cases missing on each of these within categories of my primary independent variable, race. I discover that cases are not missing completely at random—black and Hispanic students are more likely than are white and Asian students to lack information for these measures. I assume that scores are missing at random and use multiple imputation to estimate the true parameters of my sample. In order to reduce the

4 Consistent with terms of data use for NCES restricted data, frequencies are rounded to the nearest 10.
risk of biasing estimates due to imputing based on assumed qualities of survey members, I run five iterations of imputation and then analyze the pooled average of these.

Variables

Table 4.1 displays the names and definitions of variables that represent the important concepts in my analyses. In addition, means and standard deviations for these variables are included in columns to the right. Correlations between these variables are presented in Table 4.2.

Before beginning any analyses, I first set the parameters for inclusion in my sample. I am exploring racial differences in time to postsecondary completion among college enrollees, so I use a recoded version of the variable composite race to limit my sample to the racial categories that I am evaluating. Much contemporary research on academic achievement and attainment gaps focuses specifically on black/white comparisons, but in so doing, scholars fail to assess circumstances and outcomes for a large portion of the college-eligible population. Of even greater concern, whatever influence our research has on policy decisions might erroneously guide policy-makers toward solutions that address the black/white gaps, but fail to make major impact (or, even worse, have negative implications) for other racial minority groups. The racial classifications of “white”, “black”, “Hispanic” and “Asian” were selected as meaningful for my analyses; all else were relegated to missing values, both because of low sample sizes that made any potential claims about these groups suspect and the goal of assessing
the four major racial classifications in the United States. For these analyses, students who identified as being members of more than one race are not included. In order to best evaluate differences between these racial groups, I create dummy variables for each.

This study examines factors that impact time to completion of requirements for a bachelor’s degree amongst college attendees, so time between college enrollment and bachelor’s degree is my dependent variable. The responses for this continuous variable range from 0 through approximately 9.5 years after enrollment. While the original variable accounts only for variance in duration between survey participants who have earned a bachelor’s degree, it is critical to capture the eventual success (or lack thereof) of all students who enroll in college, given that students who have not graduated yet remain candidates for the degree, even if not actively enrolled. This approach is justified by Eckland’s (1964) disclosure that approximately 70 percent of people who dropped out of college returned within the next ten years to continue pursuing their education, with more than half of these returnees eventually earning a bachelor’s degree. Due to this concern, I assign students who have not completed postsecondary careers by the date of last interview an arbitrary completion date of 11 years, which extends beyond the 10-year parameters for college completion but allow these cases to be included in the analysis; however, these cases are not included in descriptive analyses so that I do not bias group means in an upward direction.

I measure the occurrence of transition to status of college graduate using the constructed variable graduated. For the purpose of this study, I regard students as having achieved this status upon completion of requirements for a bachelor’s degree; the actual
date of degree conference is a less reliable measure because this date is dependent on the
ceremonial practices of an institution and, therefore, does not inherently reflect the
amount of time required for a person to earn his or her degree. This dichotomous dummy
variable codes students for whom there is a date of completion as “1” and all others as
“0”.

In this research, I aim to compare students who are attending comparable
institutions so that racial variance in time to degree is not attributable to characteristics of
schools that students attend. Light and Strayer (2000) find that graduation rates are much
higher at high-quality institutions than at lesser-regarded ones, and Melguizo (2008)
shows that this relationship holds for racial minorities as well as for whites and accounts
for some of the racial disparity in college completion. Opponents of Affirmative Action
have argued that some racial variance in college success is due to a “mismatch” between
the prestige level of one’s university and the abilities of the minority students who are
admitted, since minority admits tend to underperform relative to their white colleagues,
but this is not born out by empirical findings (Alon and Tienda 2005). In
acknowledgement of these findings, I control for selectivity level of the first institution at
which students enroll using an ordinal variable for which open enrollment schools are
coded “1” and most selective institutions are coded “5”. In addition, I control for in-state
vs. out-of-state location of universities in order to mute the impacts of such factors as cost
of out-of-state tuition (which can be much higher at some institutions than in-state
tuition) and access to familial support.
In order to test the relationship between pre-college academic success and time to college completion, I include high school GPA, a continuous variable that measures high school academic performance on a scale of 0.00 through 4.00. I recode this scale into a set of dummy variables so that I am able to compare high- and low-achieving students to “C” students, who constitute the theoretical “average” student. I create four categories for use in some of my analyses, consistent with GPA conversions for letter grades on a A through F scale that allows for partial grades (e.g. C+ or B-): “A”, comprised of students with GPA of 3.33 through 4.00; “B”, which consists of students with GPA from 2.68 through 3.32; “C” for students with GPA of 2.00 through 2.67; and “D or F” for students with GPA that is equal to or less than 1.99. Note that the “A” category begins with a GPA that translates into a B+ average rather than an A-, but that this is also a starting point for consideration for honors at various levels of education, indicating that students who achieve at this level are considered high-achievers; I choose this number to be consistent with this perception.

The second measure of academic merit in this analysis is standardized exam scores. Despite evidence that they are a much weaker predictor of college outcomes than are high school grades (Bowen, Chingos and McPherson 2009), standardized exams continue to gain increasingly greater importance in the college admissions process (Buchmann, Condron and Roscigno 2010). This concept is represented by SAT/ACT equated. This measure is a continuous standardized test composite that rescales ACT exam scores to fit an SAT scale, which allows for a uniform assessment of students’ performances on the two college admission exams in the United States.
Contemporary research finds a growing female advantage in college enrollment and completion (Buchmann and DiPrete 2006). This gender gap may have unique implications for the race gap in college education, as gender disparity in graduation rates has been thought to vary by race, although recent evidence suggests that this effect may be exaggerated (McDaniel, DiPrete, Buchmann and Schwed 2011). In acknowledgment of this debate, I include gender as an important demographic characteristic in order to measure the effect of this variable on race differences in timing of college completion. I account for this using a dummy variable, for which females are coded “1” and males are coded “0”.

SES has long been shown to have a strong correlation with college graduation rates, as students who hail from better financial backgrounds are more likely to graduate than are their less-affluent counterparts (Alexander, Riordan, Fennessey and Pallas 1979). Independent of collinear variables (e.g. grade point average, standardized exam scores and number of extracurricular activities in which one participated in high school), SES yet has a predictive power all its own. I include socioeconomic status as a second critical demographic characteristic in order to mute the effects of racial disparity in SES on my findings. This scale variable represents an index that is comprised of measures for mother’s and father’s occupational prestige, mother’s and father’s academic prestige, and family income.

Beyond individual and family characteristics that may influence timing of college completion, I suspect that high school characteristics impact timing of college completion by way of preparing (or failing to prepare) students for various components of the
transition to the next level. Among the differences that may matter for college preparation is the urbanicity of the district within which a school is located. Roscigno, Tomaskovic-Devey and Crowley (2006) posit that the challenges that school districts face vary by urbanicity, presenting individual students and schools themselves with problems that cannot uniformly be addressed by federal policies. I argue that, even for students who emerge from the gauntlet that is public education in a struggling school district, the adjustment to college might be uniquely troublesome. To examine this, I include high school urbanicity as a set of dummy variables in my analyses, with urban schools standing as the reference category and suburban and rural schools as the comparison groups.

While college preparedness has been cited as an important factor in predicting postsecondary success, Fletcher and Tienda (2010) posit that even comparable academic performances in high school do not inherently indicate similar preparation due to variance in rigor of school curricula, evidenced by the fact that . Perhaps owing to the importance of high school academic intensity as preparation for college success, Ishitani (2006) discovers that college attrition rates are higher amongst students who attend low-intensity high schools than amongst those who attend more challenging ones. I therefore include high school intensity as an important predictive variable and measure its importance using high school rigor quintile. This ordinal variable categorically ranks schools according to an academic intensity index. Categories of this variable are ordered from weakest intensity -- “lowest 20%” -- to greatest level of difficulty at “highest 20%”. I anticipate that students who attend especially challenging high schools will adjust better
to the college environment and, therefore, will have shorter time to degree than will students with like profiles who hail from less-rigorous schools.

The final school characteristic that I include in my models is the public or private status of a student’s school. A recent study revealed that students who attend private schools are twice as likely as are those who attend public schools to graduate college (Ishitani 2006), and I suspect that time to degree is shorter for private school students than for enrollees at public institutions, as well. I measure this using a dummy variable, with “private” standing as the reference category. Owing to the known advantages that private schools have over public ones, I anticipate that students who attend private high schools will complete bachelor’s degrees in a shorter time than will those who attend public schools.

The last variable that I introduce into my models is timing of college enrollment. Bozick and DeLuca (2005) report that delaying college enrollment by more than one year after high school graduation reduces one’s likelihood of ever completing a bachelor’s degree by 64 percent. I aim to discern the impact of delayed college enrollment on racial gaps in timing of completion by adding this dummy variable to the analysis. For this variable, “enrolled within one year of college eligibility” is coded “1” and all other enrollees are coded “0”.

**Modeling strategy**
The outcome of interest for this project is time to bachelor’s degree among college enrollees, so survival analysis is appropriate to assess this. My primary findings are derived from 11 models of Cox regression analyses. This survival analysis method is ideal for measuring the effects of multiple variables on risk of transition to a new status over time.

Model 1 compares time to college completion by race, with whites as the reference category. In Models 2 and 3, I establish the baseline for assessing the effects of academic merit, ascribed status and structural factors on race gaps in timely enrollment by immediately accounting for any variance in types of colleges into which students are enrolling – the second model estimates the race effect net of the impact of college selectivity, and the third measures the influence of attending an out-of-state college; in so doing, I am able to discern whether students with like attributes experience similar outcomes after enrolling in comparable schools. In Models 4 and 5, I assess the relationship between race and timing of college completion at similar schools after measures of academic preparedness and merit are introduced, these being high school GPA and the additional impact of SAT scores, respectively. Next, I assess the degree to which the effect of academic merit on college completion is moderated by other major ascribed attributes – the sixth model accounts for the known female advantage in eventuality of college completion, while the relationship between SES of origin and racial variance in college completion is estimated in Model 7. In the next three models, I introduce high school characteristics as predictors of time to college degree: Model 8 estimates the impact of school urbanicity (urban schools are the reference category and
the comparisons are suburban and rural schools), Model 9 examines the importance of high school course rigor and Model 10 assesses the difference between attending a public or private high school. Finally, Model 11 analyzes the role that delayed college enrollment plays in informing racial variance in timing of bachelor’s degree completion.

4.5 Results

Results of my analysis (shown in Model 4.3) reveals a persistent racial order in length of time between college enrollment and completion of bachelor’s degree requirements: Asian students run statistically parallel to whites, while black and Hispanic students, respectively, lag behind even when predictive attributes are equalized.

Model 1 shows that black students are approximately 43 percent less likely to complete requirements for a bachelor’s degree in a timely manner than are whites, while the gap between whites and Hispanics is even wider at just short of 60 percent; conversely, Asian students graduate at a 26.5 percent faster rate than do whites in the unadjusted model.

In Model 2, findings reveal that the college careers of whites and Asians are statistically equal in time to completion after accounting for the admissions selectivity level of the first postsecondary institution attended. The gap between black and white students remains essentially unchanged, but college selectivity reduces the gap in time to degree completion between whites and Hispanics by approximately 10 percent.
Independently, the selectivity level of a school is very strongly impacts timing of degree completion, as an increase in level of selectivity is associated with a 187% greater likelihood of timely graduation.

The third model indicates that students take less time to graduate when the postsecondary institution of first enrollment is in a different state than the one in which they attended high school, but that equalizing on this variable does not alter the college completion gap between blacks and whites. Hispanic students reduce the gap in time to completion by approximately 1.5 percent relative to whites, while Asian students complete degree requirements 12.6 percent faster than do whites when attending out-of-state schools of like selectivity. In combination with Model 2, this model establishes the baseline against which the effects of additional indehpenent variables on racial disparity in timing of degree completion are measured.

The meritocratic argument for college success – that college preparedness as measured by prior academic success is a major determinant of postsecondary success – is partially assessed in Model 4. When enrolling in similar institutions, the time to completion of degree requirements is very significantly predicted by a student’s level of academic success in high school. While the gap between whites and Hispanics is reduced by almost 3 percent – so that Hispanic students graduate at a 46 percent slower rate than do whites – the effect of equalizing on GPA is even stronger for blacks, with a reduced lag in completion timing from 42 percent to 30 percent. Asian students graduate at an 8.6 percent faster rate than do their white counterparts in this sample, although these results are not generalizable. Notably, this model reveals a very strong relationship between
high school grades overall and timing of college completion, as students whose high school GPAs were above average enjoyed increasingly shorter time to completion than did average students, while low-achieving students take 64 percent longer than do average performers to complete bachelor’s degree requirements.

Model 5 introduces the relationship between standardized exam performance and racial variance in the length of time it takes to earn a bachelor’s degree. The white/black gap responds strongest to a leveling of SAT scores, as blacks who have comparable scores and similar high school grades to their white counterparts take 20 percent longer than white students to complete degree requirements, an improvement of 10 percent. The reduction in the white/Hispanic gap is more modest, but still notable at 4 percent, which mirrors the effect on the Asian/white gap, although the latter is not statistically significant. Independently, an increase of one point on one’s SAT score improves the likelihood of timely graduation by .2 percent, meaning that the expectation of timely graduation increases by approximately 20 percent for each 100-point increase in SAT performance. In combination, high school GPA and SAT, long considered standard measures of college preparedness and upheld as the indicators of academic merit, account for a great degree of racial variance in timing of college completion, while a substantial gap yet remains net of these variables.

The female advantage in college completion is accounted for in Model 6. The introduction of gender to the overall model has a negligible effect on the relationship between race and timing of college completion. Independently, females are shown to
enjoy a 26.4 percent advantage in duration of time between college enrollment and satisfaction of bachelor’s degree requirements.

In Model 7, SES is added to the analysis and found to be a strong predictor of time spent earning a bachelor’s degree. For both blacks and Hispanics, the gap in time to college completion relative to whites is reduced by approximately 8 percent when they are compared to peers who are of like socioeconomic standing when all preceding variables are held constant. The coefficient for Asians remains consistent with that of the previous model and continues to fall short of statistical significance. Improvement of one’s SES correlates with an improved likelihood of timely graduation of 48 percent. The race coefficients in this model reflect existing racial gaps after accounting for ascribed status and academic achievement, but neither ascription nor individual agency is able to deliver equality on the outcome variable between whites and non-Asian racial minorities – whites remain almost 13 percent more likely to graduate before blacks and more than 30 percent more likely to do so before Hispanics once these variables are controlled for. Also of note, the impact of school selectivity on the dependent variable is reduced when ascribed characteristics and academic success is accounted for.

Findings in Model 8 reveal no significant urban advantage in converting high school success into college completion in a timely manner, as students from urban, suburban and rural schools run virtually parallel in length of college careers when college characteristics and demographic data are accounted for and academic performance is equated. Likewise, the impact of the urbanicity of one’s high school on timing of completion is also minimal.
In Model 9, the influence of high school intensity on time between college enrollment and completion of bachelor’s degree requirements. Results show that students from more rigorous high schools complete degree requirements approximately 30 percent faster than do those from the next-lowest quintile. When variance in the rigor of the academic curriculum is introduced into the analysis, the gap between whites and blacks in timing of completion widens by about 2 percent, while the divide between whites and Hispanics increases slightly and Asian students continue to run parallel to whites. The inclusion of high school intensity quintile reduces the effect of college selectivity on the dependent variable by 14 percent, implying the expected positive relationship between academic reputations of high schools and the prestige of the institutions to which students are admitted when all other factors are comparable.

The tenth model compares the impact of attending a private or public high school on college completion timing. Students who have attended a private high school graduate at a 28 percent faster rate than those who graduated from public schools. The racial gaps between whites and both blacks and Hispanics are reduced by approximately 2 percent once this variable is added to the previous model.

The final model shows a strong relationship between timing of college enrollment and duration of time between enrollment and degree completion – students who enroll within one year of high school completion graduate at a rate almost 300 percent faster than those who delay enrollment beyond one year. However, inconsistent with my prediction, racial variance in timely enrollment is found to have a weak impact on gaps between white students and Hispanics, which remains strongly significant. The
white/black gap in time to completion is reduced by approximately 2 percent, which
causes this coefficient to fall from statistical significance. Measured against the baseline
model (Model 3), the additional variables in this model have accounted for 30 percent of
the difference in timing of graduation between blacks and whites.

4.6 Discussion

The results of my analysis support many of my hypotheses and fail to provide evidence
for a few. Of most overall importance, I confirm that, while measured pre-college
achievement is a strong predictor of timing and eventuality of college graduation, merely
equating students on these variables is not sufficient to eliminate the racial gaps in timing
of college completion. If we accept standardized exam scores and high school GPA as
legitimate indicators of academic merit -- as they are explicitly deemed to be by
admissions committees -- then we should hope to notice a stronger relationship between
these achieved measures and college completion, but this is simply not the case. Indeed,
while one’s academic track record is an important factor in gaining admission to colleges
and universities of choice, the predictive power of these variables for postsecondary
success varies notably by race.

Turning to the influences of other ascribed characteristics on the relationship
between race and timing of college completion, race remains a strong predictor of time to
degree after the effects of gender and SES are measured. The gender gap in time
between college enrollment and fulfillment of graduation requirements strongly favors
females, but does not reduce the racial disparities on the dependent variable. This finding implies, as claimed by McDaniel, Buchmann, DiPrete and Schwed (2011), that the relationship between race and the gender gap in higher education may be overstated. SES has a strong reductive effect on racial gaps in time to college completion, but these inequalities do not disappear when comparing students from similar socioeconomic backgrounds, signaling a race effect that operates independent of parental educational, occupational and financial differences. (An important caveat is that, as Oliver and Shapiro [1995] report, the impact of financial status is likely understated by merely controlling for SES, since whites tend to own several times the household wealth of minorities who are at the same income level.) Perhaps most surprising is the finding that accounting for SES barely influences the relationship between high school GPA and timing of tertiary school completion, given my finding in Chapter 3 that financial standing explains racial disparities in ability to translate strong academic track records into timely college enrollment for black and Hispanic students.

This research supports the findings of prior literature that high school characteristics impact the college graduation gap between black and Hispanic students and their white and Asian counterparts, and I find evidence that students who attended academically rigorous high schools are much more likely than those who were prepared at less-challenging schools to graduate college in a timely manner, but that accounting for this factor slightly increases the gap in timing of college graduation between white students and both black and Hispanic students rather than reducing it. This means that differences in the difficulty of high school curricula are not a strong explanation for racial
variance in the duration to degree completion. Increase in the academic rigor level of high school reduces the impact of variance in high school academic performance and standardized exam scores, indicating that there is less difference between high-achievers and their lower-performing peers in college preparedness at rigorous schools than at weaker schools. This finding suggests that, in addition to variance between school types, preparedness of students for college success also varies within schools, consistent with a similar finding by Fletcher and Tienda (2010).

The strongest identified predictor in my analyses is timing of college enrollment. The revelation that on-time enrollees are approximately 300 percent more likely than those who delay enrollment for more than one year evidences the importance of remaining on a persistent track throughout one’s academic career. The detriment of delaying college entry is evident for all races, and while the impact of this decision may appear to be slightly stronger for black students (the gap between blacks and whites falls from significance while the white-Asian and white-Hispanic gaps remain unmoved), findings from Chapter 3 indicate that SES is the most potent predictor of timing of enrollment, meaning that inclusion of SES in the model likely inadvertently equalizes college-goers on this measure.

One final set of results calls attention, even as they are not part of the main story in my analyses. While the coefficients for level of college selectivity are consistent with expectations based on prior research, it is especially notable that students actually are significantly more likely to graduate in a timely manner when attending an out-of-state school than an in-state school. This relationship must be further examined.
4.7 Conclusion

Overall, my analyses reveal that the race of a student informs likelihood of timely college graduation, even after controlling for type of college attended and accounting for individual ascribed characteristics, high school characteristics, academic merit and timing of college enrollment. Doubtless, there exist factors of influence that I have not accounted for, but this research yet convincingly answers the question of whether racial gaps in timing and eventuality of college completion are best attributed to variance in displayed academic ability -- they are clearly not.

Academic merit does, indeed, matter greatly for the timing of college completion, a finding that is consistent with my earlier prediction. Of the two measures examined in this research, high school grades more strongly influence the amount of difference between racial groups, although standardized exam performance is revealed as strongly influential in its own right. Confirmation of the importance of both SAT scores and high school GPA lend credibility to the practice of taking both of these measures into account during admissions processes rather than only one or the other, although what they really represent in terms of college preparedness is less than clear. Ostensibly, these measures are purported to reflect the school commitment, work habits and cognitive abilities of students, traits that should translate favorably into success in college for those who possess them. However, it also is possible that the school environments that enable such
performances on average also play a contributing role in preparing high school students for next-level success.

Importantly, the findings in this analysis betray the popular assertion that observable racial inequalities in the status attainment process are more accurately attributable to social class differences than to racial classification. While the strong reductive effect of SES on duration gaps between whites and both blacks and Hispanics demands attention, wide disparities still persist when controlling for social class -- the observed inequalities clearly are attributable to the races of the respondents. While virtually no difference exists between the frontrunning white and Asian categories and the advantage of these two groups over blacks and Hispanics stands out most, I call particular attention to the racial gap between blacks and Hispanics in timing of college completion, net of all other measured variables. While blacks benefit from strong performances, such that equalizing on school characteristics and academic merit reduces the white/black graduation gap to non-significance, Hispanics actually fall further behind blacks when these factors are leveled. Most notable is the strong impact of high school grades on the timeliness of college graduation amongst blacks (reducing the gap in likelihood of timely graduation between blacks and whites by 12 percent) as contrasted with the very small effect on the white/Hispanic gap. The disparity in the impact of SAT performance is not as wide, but is nevertheless more prominent than is any difference in the effect of any school or individual characteristic. Certainly, the uniquely weak predictive power of academic success for the college graduation of Hispanics is a matter that requires further scrutiny.
This study is not without limitations. First, my approach to operationalizing time to degree leads to results that predict the length of time that is spent pursuing a bachelor’s degree, but I do not allow for a finite end to this quest. For some people, returning to college simply will not be the chosen option, so although these cases are treated as ongoing, their inclusion is likely to bias results in an upward manner. I answer this objection by noting that even those who withdraw from college remain degree-eligible, and that it is therefore substantively more suspect to regard their college careers as having been terminated rather than suspended. In addition, a second critique might be that I do not differentiate between those who enroll directly into a 4-year college after high school and those who pursue a non-traditional route aside from delayed enrollment, such as going to a community college or attending a 4-year college on a part-time basis. This further analysis is well worth doing, but my decision to exclude this approach from this paper does not detract from my objective of determining the duration between first enrollment in a postsecondary institution and earning a bachelor’s degree, since no postsecondary enrollment option makes one ineligible to earn a bachelor’s degree going forward and, as Bowen, Chingos and McPherson (2009) note, community college is often an indirect path to a bachelor’s degree for those who cannot gain direct admission to a 4-year institution.

Going forward, research must identify processes through which racial differentiation exists net of factors that should rightly determine outcomes in an ideal meritocracy. If academic prowess and cognitive skills are not the great equalizers in the quest for a college degree, then the responsibility of researchers is to learn how this
relationship can be strengthened -- by way of either improving the ability of high school GPA and standardized exam scores to truly capture these attributes, enabling these factors to better translate into next-level success, or some combination of both -- and the call to policy-makers is to make it so.
<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Metric</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Timing of college completion</strong></td>
<td>Time to college completion</td>
<td>Scale</td>
<td>4.53</td>
<td>1.07</td>
</tr>
<tr>
<td>High school GPA</td>
<td>Self-reported grade point average at the end of 12th grade</td>
<td>Scale</td>
<td>2.69</td>
<td>.77</td>
</tr>
<tr>
<td>SAT/ACT scores equated</td>
<td>Composite scale of SAT scores and ACT scores that have been rescaled to an SAT scale</td>
<td>Scale</td>
<td>839.77</td>
<td>232.88</td>
</tr>
<tr>
<td>High school intensity</td>
<td>Ordinal variable that ranks high school rigor into five quintiles of difficulty</td>
<td></td>
<td>2.90</td>
<td>1.41</td>
</tr>
<tr>
<td>Urban HS</td>
<td>High school located in urban area</td>
<td>0 = no</td>
<td>.28</td>
<td>.45</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suburban HS</td>
<td>High school located in suburban area</td>
<td>0 = no</td>
<td>.40</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural HS</td>
<td>High school located in rural area</td>
<td>0 = no</td>
<td>.31</td>
<td>.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private HS</td>
<td>Graduated from a private high school</td>
<td>0 = no</td>
<td>.12</td>
<td>.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selectivity</td>
<td>Level of selectivity of first postsecondary institution</td>
<td>1 = open enrollment</td>
<td>2.66</td>
<td>.074</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 = highly selective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out-of-State</td>
<td>Student’s college in different state than last high school</td>
<td>0 = no</td>
<td>.17</td>
<td>.38</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timely college enrollee</td>
<td>Enrolled in college within one year of graduating high school</td>
<td>0 = no</td>
<td>.62</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Socioeconomic status</strong></td>
<td>Composite SES</td>
<td>Continuous measure constructed from parent survey that incorporates father's education level, mother's education level, father's occupation, mother's occupation, and family income</td>
<td>Scale</td>
<td>-.03</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>Female</td>
<td>Dummy variable constructed from recoding of F4SEX.</td>
<td>0 = male</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 = female</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.1: Means, standard deviations and descriptions for variables used in analysis
<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Metric</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no</td>
<td>.70</td>
<td>.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no</td>
<td>.10</td>
<td>.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no</td>
<td>.14</td>
<td>.34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no</td>
<td>.07</td>
<td>.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.2: Correlations for variables in analysis

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Years to B.A.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. white</td>
<td>-.111</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. black</td>
<td>.087</td>
<td>-.498</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Hispanic</td>
<td>.165</td>
<td>-.598</td>
<td>-.131</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Asian</td>
<td>-.099</td>
<td>-.418</td>
<td>-.091</td>
<td>-.110</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. selectivity</td>
<td>-.531</td>
<td>.061</td>
<td>-.047</td>
<td>-.124</td>
<td>.110</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. out-of-state</td>
<td>-.207</td>
<td>.066</td>
<td>-.012</td>
<td>-.084</td>
<td>.007</td>
<td>.248</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. SES</td>
<td>-.418</td>
<td>.222</td>
<td>-.136</td>
<td>-.248</td>
<td>.090</td>
<td>.413</td>
<td>.271</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. female</td>
<td>-.046</td>
<td>-.016</td>
<td>.019</td>
<td>.012</td>
<td>-.008</td>
<td>-.003</td>
<td>-.035</td>
<td>-.044</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. HS GPA</td>
<td>-.496</td>
<td>.111</td>
<td>-.136</td>
<td>-.115</td>
<td>.111</td>
<td>.494</td>
<td>.152</td>
<td>.357</td>
<td>.085</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. SAT</td>
<td>-.502</td>
<td>.138</td>
<td>-.138</td>
<td>-.162</td>
<td>.128</td>
<td>.546</td>
<td>.267</td>
<td>.525</td>
<td>-.030</td>
<td>.628</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. timely enrollee</td>
<td>-.338</td>
<td>.062</td>
<td>-.082</td>
<td>-.097</td>
<td>.112</td>
<td>.368</td>
<td>.095</td>
<td>.412</td>
<td>.044</td>
<td>.404</td>
<td>.372</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. urban HS</td>
<td>-.041</td>
<td>-.239</td>
<td>.103</td>
<td>.169</td>
<td>.084</td>
<td>.052</td>
<td>.020</td>
<td>.041</td>
<td>.000</td>
<td>.020</td>
<td>.057</td>
<td>.041</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. suburban HS</td>
<td>-.039</td>
<td>.076</td>
<td>-.074</td>
<td>-.068</td>
<td>.041</td>
<td>.044</td>
<td>.027</td>
<td>.140</td>
<td>-.010</td>
<td>.013</td>
<td>.061</td>
<td>.065</td>
<td>-.516</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. rural HS</td>
<td>.081</td>
<td>.161</td>
<td>-.028</td>
<td>-.099</td>
<td>-.123</td>
<td>-.091</td>
<td>-.047</td>
<td>-.177</td>
<td>.011</td>
<td>-.029</td>
<td>-.116</td>
<td>-.097</td>
<td>-.421</td>
<td>-.548</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. private HS</td>
<td>-.239</td>
<td>.094</td>
<td>-.049</td>
<td>-.074</td>
<td>-.013</td>
<td>.230</td>
<td>.182</td>
<td>.325</td>
<td>-.019</td>
<td>.172</td>
<td>.258</td>
<td>.207</td>
<td>.303</td>
<td>-.080</td>
<td>-.207</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>17. HS intensity</td>
<td>-.504</td>
<td>.031</td>
<td>-.069</td>
<td>-.095</td>
<td>.151</td>
<td>.523</td>
<td>.177</td>
<td>.421</td>
<td>.021</td>
<td>.595</td>
<td>.577</td>
<td>.455</td>
<td>.083</td>
<td>.043</td>
<td>-.121</td>
<td>.238</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4.2: Correlations for variables in analysis
<table>
<thead>
<tr>
<th></th>
<th>Model 1 Exp(B)</th>
<th>Model 2 Exp(B)</th>
<th>Model 3 Exp(B)</th>
<th>Model 4 Exp(B)</th>
<th>Model 5 Exp(B)</th>
<th>Model 6 Exp(B)</th>
<th>Model 7 Exp(B)</th>
<th>Model 8 Exp(B)</th>
<th>Model 9 Exp(B)</th>
<th>Model 10 Exp(B)</th>
<th>Model 11 Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RACE (REF = WHITE)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.571***</td>
<td>0.581***</td>
<td>0.583***</td>
<td>0.700***</td>
<td>0.801**</td>
<td>0.790**</td>
<td>0.867*</td>
<td>0.863*</td>
<td>0.841*</td>
<td>0.865*</td>
<td>0.885</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.410***</td>
<td>0.503***</td>
<td>0.519***</td>
<td>0.607***</td>
<td>0.610***</td>
<td>0.606**</td>
<td>0.693**</td>
<td>0.682**</td>
<td>0.701***</td>
<td>0.703***</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>1.365***</td>
<td>1.088</td>
<td>1.126*</td>
<td>1.086</td>
<td>1.047</td>
<td>1.040</td>
<td>1.055</td>
<td>1.053</td>
<td>0.998</td>
<td>1.035</td>
<td>1.039</td>
</tr>
<tr>
<td><strong>COLLEGE CHARACTERISTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admission selectivity</td>
<td>2.867***</td>
<td>2.755***</td>
<td>2.245***</td>
<td>1.925***</td>
<td>1.933***</td>
<td>1.832***</td>
<td>1.831***</td>
<td>1.690***</td>
<td>1.662***</td>
<td>1.597***</td>
<td></td>
</tr>
<tr>
<td>Out-of-state</td>
<td>1.364***</td>
<td>1.367***</td>
<td>1.232***</td>
<td>1.232***</td>
<td>1.122*</td>
<td>1.120**</td>
<td>1.143***</td>
<td>1.119***</td>
<td>1.173***</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HS GPA (REF = C AVERAGE)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS GPA: A average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS GPA: B average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS GPA: D or F average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STANDARDIZED EXAMS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAT score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASCRIBED CHARACTERISTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HS URBANICITY (REF = URBAN)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suburban</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HS CHARACTERISTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS rigor quintile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private HS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COLLEGE ENROLLMENT TIMING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within 1 year of HS graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.916***</td>
</tr>
</tbody>
</table>

Table 4.3: Odds ratios for Cox regression of years to bachelor’s degree on race, education, institutional characteristics and timeliness of college enrollment
CHAPTER 5: MAKING THE (PAY) GRADE -- RACIAL VARIANCE IN
FINANCIAL PAYOFF TO ACADEMIC SUCCESS

5.1 Abstract: This paper examines the role of academic prosperity in determining racial wage inequality among fulltime workers by age 26. Bivariate analysis indicates that whites earn significantly more money per year than do blacks and Hispanics, but less than Asians; while socioeconomic status explains the Hispanic disadvantage relative to whites, the gap between whites and blacks remains strongly significant after accounting for highest degree earned, high school academic performance, cognitive skills and timeliness of college graduation. Controlling for occupation and employment sector reduce this gap slightly, but these findings nevertheless reveal a black/non-black dichotomy in income attainment and suggest that race has a powerful explanatory effect on income regardless of academic success.

5.2 Introduction

Three decades ago, William Julius Wilson (1978) posited that race has declined as the most influential system of stratification in American society, replaced by impartial market forces that reward skills and credentials above all else. Despite this assertion, a wage gap nevertheless continues to exist between white males and their black, Hispanic and Asian counterparts in the United States (Black et al. 2006). While labor market inequality has decreased in the decades since the Civil Rights movement, the resiliency of the racialized social order in earnings suggests that forces of differentiation are still at work.
A popular attempt to reconcile racial disparities in income to the ideology of a post-racial America is the claim that these inequalities are attributable to variance in academic attainment; ostensibly, once racial groups are equalized on academic credentials, the income gap fades from significance. Proponents of this theory do not argue that race is inconsequential, but rather emphasize ways in which historical racial inequality informs the pursuit of marketable skills and degrees (Wilson 1990, Neal and Johnson 1996). The implicit assumption herein is that if we could somehow enable equally motivated and talented students to earn the same credentials regardless of race, commensurate occupational success would follow suit.

This much-debated relationship between education and income is central to this study. In it, I assess racial variance in payoffs to education and test the assumption that racial wage inequality is the result of processes that precede the earning of credentials. I confirm that a racial gap in income remains net of controls for academic attainment and examine the impacts of measures of academic merit – i.e. grades and standardized exam scores – on this disparity. Furthermore, I highlight the disparate impact of academic success on intraracial variance in income.
5.3 Racial income disparity – competitive attainment or allocation?

In the post-Reconstruction Era United States (from 1877 onward)\(^5\), blacks faced tougher entry into the American labor markets than did white immigrants, due, in part, to protectionism practiced by whites (Lieberson 1980), a dynamic that endured through the Civil Rights Era of the 1960s (Bonacich 1972). Such overt racial discrimination in hiring, firing, wage compensation and other terms of employment was made illegal by the Civil Rights Act of 1964 (Blankenship 1993), and in recent decades, labor force inequality has been viewed as a litmus test for the well-being of greater society on racial issues.

The advancements of the Civil Rights Era have given rise to hopes for a society in which the dictates of race and social class no longer inform occupational success. However, despite reforms that are intended to reward merit rather than ascribed status, racial disparity in earnings endures in contemporary America, with whites enjoying a notable advantage over blacks and Hispanics and some meaningful, although smaller, advantage relative to Asians (McCall 2001). Attempts to reconcile this finding with our professed ideology necessarily center on one question: If overt discrimination is no longer admissible, but the racialized patterns of stratification still exist, what primary force is driving this inequality in today’s society? Here, I replicate the known racial gap in earnings and examine two contrasting explanations for its persistence: a) racial income

---

\(^5\) The Reconstruction Era in the United States spanned the duration from the introduction of the first Reconstruction Acts in 1867 to the Compromise of 1877 that removed law-enforcing federal troops from the former Confederate states.
inequality is determined by meritocratic processes that penalize racial disparities in academic credentials and skills; and b) racial income inequality is not explained by measures of merit and is, rather, due to labor market discrimination. I provide evidence to support the latter argument.

*Racial wage inequality in the United States*

One of the primary measures of labor force equity is wage disparity between groups. While some income inequality may be a matter of self-selection (Marini and Fan [1997] find that differences in aspiration explain the biggest portion of an observed gender gap in wages in the United States), variance in wages has often been upheld as evidence of disparate – indeed, perhaps even discriminatory – structural processes that determine financial capital. There are several reasons that this measure is useful for evaluating the health of a labor market: 1) income is a quantified measure that is easily determined and verifiable; 2) many major factors that are known to impact income are also easily empirically knowable, making the task of distilling effects of one variable (or a set of variables) on its variance relatively straightforward; and 3) income level is a practical way of assessing the value of one worker relative to another when job and individual characteristics are taken into account. For these reasons, I center my evaluation of the returns to academic success on the relationship between education and wage inequality.

The Civil Rights Movement that took place in the United States during the 1960s brought about structural changes that made denial of opportunities based on race illegal
throughout the country. Accompanying this sweeping change was the premise that social mobility and status attainment processes for all minority racial groups would soon come to mirror those that dictate the future statuses of white students, especially for blacks who attained advanced academic degrees (Wilson 1978). Yet, while income inequality between blacks and whites narrowed in the decade following the civil rights movement relative to previous decades, Cancio, Evans and Maume (1996) argue that this momentum was broken only one decade later; the authors compare findings derived from the Panel Study of Income Dynamics from 1976 and 1985 and conclude that racial wage disparity was, once again, on the rise by the middle of the 1980s.

Today, more than thirty years after Wilson (1978) claimed that education and skill sets had overtaken ascribed status as the main determinant of job market success, a racial wage gap remains observable in the United States (Coleman 2003). In the succeeding sections, I present the arguments for two schools of thought on why this is so.

*Racial wage inequality as a function of meritocratic processes*

One explanation for racial variance in income is that income and other associated occupational outcomes are derived from success in competition for limited resources. To the extent that a racial advantage exists, some researchers attribute this primarily to premarket factors that predict success in the race for necessary credentials that translate into commensurate compensation – some groups are more likely to have competitive profiles than are others as a result of inequality earlier in the life course (Neal and Johnson 1996). This competitive advantage is, indeed, yet racialized (Wilson 1990), but
only by way of supporting Blau and Duncan’s (1967) finding that the educational and occupational attainment of one’s parents impact one’s occupational attainment through influence on education; minorities are less successful in the labor force than are whites because the disenfranchisement of prior generations makes them less likely to acquire the credentials and skills that are valued highest in the labor market.

Black et al. (2006) explore the impact of education on the racial wage gap among males in the U.S. using data from the 1993 National Survey of College Graduates. They conclude that differences in years of schooling, credentials, college major, command of the English language and age explain disparities between white males and their Asian and Hispanic counterparts, while only approximately one quarter of the wage gap between black and white men is attributable to these premarket factors. These findings are noteworthy, because they imply that different processes are determining the observed racial disparities in wages, but they demand further evaluation, given some of the limitations of this study. First, this paper includes no measure of academic performance, despite the fact that Neal and Johnson (1996) argue that variance in exam scores explains virtually the entire wage gap between blacks and whites. Second, given that research by Bobbitt-Zeher (2008) on disparate payoffs to education by gender find that men get more financial mileage out of their degrees than do women, the exclusion of females in the Black et al. study may have meaningful consequences. Finally, the authors focus this analysis on college-educated men, meaning that assessing payoffs to a college degree relative to a high school diploma or no certification at all is not possible.
Prior research that includes both male and female earners in the study sample gives us a picture of the relationship between schooling and income that is comparable with that offered by Black et al (2006). In research that evaluates differences in returns to education between blacks and whites, Ashraf (1994) estimates financial payoffs within each group for students who fail to finish high school as compared to those who earn diplomas, others who enroll in college but fail to finish, and those who earn college degrees. Using data from the first twenty waves of the Panel Study of Income Dynamics, this research finds that the relationship between academic attainment and income has been uneven throughout the post-Civil Rights era, but that blacks actually received notably more mileage on college degrees relative to whites during the 20-year period spanning from 1967 through 1986. The author attributes this black advantage, in part, to the fact that relatively fewer blacks earn college degrees compared to whites and are likely to personally benefit from their scarcity in the job market through diversity initiatives. The author is limited by data and is, therefore, unable to make inferences about the impact of skills and academic performance on these outcomes.

An important omission in the aforementioned studies about the relationship between education and income is the fact that, while academic attainment is accounted for in this research, measures of achievement are not. There are legitimate reasons to consider the impact of school performance, because this premarket factor not only potentially determines who gains access to preferred next-level opportunities in the ascent up the academic ranks, but it also may be regarded as an approximate measure of cognitive ability, work ethic and overall preparedness (Alon and Tienda 2007). All of
these attributes are, of course, legitimate criteria for determining success in the labor force, so it is necessary to estimate their effects. Owing to the great regard for standardized exam scores and grades as proxies for merit in our society, I also assume these variables as measures of academic success.

Blackburn (2004) presents a nuanced approach to assessing the impact of standardized exam scores on racial gaps in wage inequality. His findings support conclusions of earlier research that part of the wage variance between blacks, whites and Hispanics is attributable to differences in skills that are captured in standardized exam performance. However, Blackburn diverges from the claims of prior researchers (Neal and Johnson 1996, O’Neill 1990) in positing that exam scores explain only a relatively small portion of racial wage disparities rather than most or all of this variance.

*Racial income inequality as a function of non-meritocratic processes*

Despite the demonstrated importance of achieved characteristics in determining outcomes for workers in the United States, claims that academic success negates the race effect are unconvincing. On the contrary, evidence abounds that discrimination in the labor market appears even at the earliest entry point into the active labor force. Pager, Bonikowski and Western (2009) uncover blatantly discriminatory hiring practices by managers who show a greater inclination to extend job offers to whites who have criminal records than to blacks and Hispanics who lack them, and Pager and Quillian (2005) find that racially discriminatory hiring practices persist even amongst managers who indicate no such bias in survey data. Notably, these inequalities are evident even
though the job candidates whose hiring prospects are assessed in Pager et al. (2009) carry inauthentic resumes that are strikingly similar in terms of age, credentials and interpersonal skills. The only major differences between these candidates are criminal records and race, making the strong case that observed racial variance is, indeed, due to discrimination.

For racial minorities who attain full-time positions, inequality in promotion and firing practices (Byron 2010; Mong and Roscigno 2010) remain a major threat to increase inequality in occupational rank among workers who have like credentials. Such incongruence between credentials and position within the occupational hierarchy is a known contributor to racial wage inequality.

Notably, income disparity by race has been shown to persist even when members of different racial groups occupy comparable positions in the labor force. Using data from the 1990 Census and the Dictionary of Occupational Titles, Grodsky and Pager (2001) assess white/black wage disparities in the United States and find evidence of a white advantage in the private sector (but not in public sector jobs); contrary to Wilson’s (1978) argument, the authors report the null finding of a skill-gap effect on wage disparities in the private sector and conclude that something other than meritocracy is driving this inequality.

Not only have researchers argued that skill sets do not explain the entirety of the wage gap, but Coleman (2003) contends that more direct measures of worker competence reveal evidence of clear racial discrimination. He concludes that, when white and black
men are evaluated equally by employers (using an employer’s competitive performance rating that is included in Multi-City Study of Urban Inequality Employer Survey), the wage gap actually increases. The only explanation for this, the author posits, is discriminatory practice on the part of employers, since evaluators are also accountable for management of wages.

The abovementioned studies strongly support the premise that equality on measures of merit alone is not sufficient to eliminate racial wage inequality. They indicate that forces of discrimination both incidental and intentional combine to suppress the agency of workers in the labor force. Going forward, I critically assess the meritocratic arguments that aim to reduce racial disparities in the labor market to not more than the sum of premarket inequality at the training stage and aim to support the contention that the impact of these measures of merit on racial wage gaps is unduly weak.

**Academic success as measures of merit**

This research empirically tests the assumption that wage inequality is due to achieved characteristics rather than ascribed status. Due to the fact that society regards academic success as a primary operational definition of merit, this project aims both to examine the tiered impact of academic success on labor market inequality and to assess this disparity when measures of academic merit are equated.

As indicated by Alon and Tienda (2007), the primary proxies for student capability and accomplishment are GPA and standardized exam scores. The legitimacy of these measures as true indicators of ability to meet next-level requirements – and,
therefore, their status as rightful determinants of access to future opportunities – is not without controversy. With regard to standardized exams, Rothstein (2004) notes the weak predictive power of the Scholastic Aptitude Test (SAT) for first-year grades of college enrollees, and Buchmann, Roscigno and Condron (2010) reveal a powerful correlation between socioeconomic status and SAT scores, highlighting the fact that success on this exam is at least as indicative of social privilege as of intellect. Likewise, high school grades have been shown to strongly react to variance in SES, to racialized teacher perceptions of students, and to home factors such as parental investment and number of siblings. On the other hand, Jencks and Phillips (1998) argue that standardized exams have improved as both reflectors of cognitive skills and predictors of labor market success, and Rosenbaum (2001) forwards high school grades as meaningful indicators of abilities that are necessary for success in the labor force. It is precisely because of the disputed relevance of these measures as indicators of merit that they must be empirically analyzed as predictors of income.

5.4 Data and Methods

Data

The data used for this analysis are from the fourth follow-up of the National Education Longitudinal Survey Restricted Data (NELS:88-00R). This data set contains a sample of individuals who participated in each wave of the study from 1988 through its conclusion in 2000. These data were collected by the National Center for Education Statistics. Participants in the sample were in grade 8 in schools throughout the United
States at the time of the first interviews, which was conducted in 1988; the majority of them were in the labor force at the conclusion of the survey.

There are several reasons why NELS is useful for analyzing racial variance in payoffs to academic credentials. First, it is a nationally representative data set, so findings are generalizable to the U.S. population at large. Second, the data set contains a large enough sample of white, black, Hispanic and Asian students from which to derive meaningful conclusions for each group. Third, NELS makes use of multiple methods in order to accurately ascertain the race and sex of participants and imputes data where necessary so that loss of cases due to missing data is kept to a minimum. Finally, these data provide a unique window into the academic experiences of people who are in the labor force, owing to its longitudinal design that captures information at multiple points in their school-to-work progressions and follows students through their entry into the working world.

I acknowledge some limitations to using NELS for this analysis. First, the cohort that these data provide information for entered the labor force in the late 1990s, which was a time of relative economic prosperity in the United States; findings for a time of recession might be inconsistent with those of this paper, given the increased likelihood that people will accept jobs that are not related to their areas of specialization or commensurate with their degrees. Second, the characteristics of college-going students in the United States may have shifted since most of the students in this survey first became college-eligible in 1992, so the predictors of labor market success that vary across groups may have increased or decreased in explanatory power during this time.
Nevertheless, the findings of this study still are noteworthy, given the likelihood that inequalities observed during times of economic prosperity represent the best-case scenario for job-seekers of all racial backgrounds and the improbability of explanatory variables falling from significance altogether in one decade.

**Sample**

For this analysis, I limit my sample to students who are classified as white, black, Hispanic or Asian. I use the variable *respondent’s race* to capture this, since this race variable has the least missing data in this wave. The racial category of a student is identified in one of three ways: a) self-identification during interview; b) identification by parents who took part in parent interviews, or c) racial categories indicated on school records. Students whose primary racial classification is not in one of the four selected categories are excluded from my sample.

In addition to limiting my sample by race, I also include only participants who were employed full-time -- defined as at least 40 hours per typical week -- for at least 40 weeks in 1999. This decision is guided by a desire to compare only full-time earnings of participants so as to negate the potentially confounding effects of racially disparate unemployment rates.

**Variables**

I present the names, operational definitions and descriptive statistics for the variables in my models in Table 5.1. Table 5.2 displays the correlations between these variables.
The dependent variable for my analyses is respondent's income in 1999, a continuous variable that reports income in dollars as indicated by respondents. The sample from which these data are derived is comprised of students who were in the eighth grade at the start of the first wave of interviews in 1988, with ages of approximately 13 or 14 years. Thus, at the time that the selected variable is measured, a majority of these participants have reached the age of 25, an age by which many people are already engaged in the labor force, most in the early stages of their careers. In addition, this measure is the latest year of reported income for participants, so it provides the most recent information relative to the date of interview.

This paper explores racial variance in the financial payoff of academic credentials, so composite race is my primary independent variable. While many comparisons of labor market outcomes by race focus on black/white gaps, I choose to compare the outcomes for four racial groups: whites, blacks, Hispanics and Asians. My reasons for this decision are several. First, the overwhelming majority of people in the United States are classified as belonging to at least one of these racial groups. (A fifth group, Native Americans, is well underrepresented in NELS, such that exclusion of this category is practically mandated by the fact that findings for this group would prove statistically unreliable.) Due to this, although much of the research on racial inequality in America centers on disparities between blacks and whites, a black/white comparison would yield a limited view of the complexities of contemporary racial stratification, and remedies that might improve the prospects for blacks might have little impact – or even an adverse effect – on the labor market successes of Hispanics and Asians. Second,
given that these four racial groups experience varying outcomes on several measures of social ranking (e.g. academic performance or socioeconomic status), the outcomes for Hispanics and Asians should not be assumed to merely mirror those of whites or blacks on this set of outcome. Each racial group is represented by a dummy variable in my analysis.

_Socioeconomic status_ (SES) is included as a control variable due to its known impact as a vehicle of racial inequality in society. A respondent’s SES score is derived from an index that accounts for academic attainment of both of one’s parents, occupational prestige of both parents, and family income. For this project, I select the SES score from the base year of the NELS survey because SES measured during the selected wave approximates the standing of a participant’s family at the inception of his or her high school career and, therefore, best represents a student’s position of origin.

Bobbitt-Zeher (2008) establishes that income varies by gender even after accounting for measures of academic merit and achievement. In order to account for the impact of this variance on my results, I control for _respondent’s sex_ in my analysis. This concept is represented as a dummy variable, for which female=1.

The primary independent variable of interest is _highest credential earned_. Above all else, racial income inequality in today’s society is most attributed to the fact that blacks and Hispanics typically underperform in terms of academic attainment relative to whites and Asians. Therefore, a large portion of any wage gap that is observed in the unadjusted model should be accounted for by equalizing on this variable. I recode this
variable into a set of dummy variables: “less than high school diploma”, which captures all who report this as their highest level of completion; “high school diploma” includes anyone who has earned either a high school diploma or general equivalency degree; “associates degree”; “bachelor’s degree”; and “graduate/professional degree”, which includes all respondents who have earned any graduate or professional degree.

The next two inclusions into my model are primary measures of academic merit and, if school success truly does predict income, should significantly impact racial wage differentials above and beyond the effects of credentials.

Of all measurable premarket factors, perhaps none reflect the impact of talent and motivation better than does academic performance. In addition to degree of intellect, high school grades represent the accumulation of technical, social and cognitive skills that predict occupational performance, although employers are thought give little thought to high school academic performance when considering early-career candidates or their commensurate compensation. My models include high school GPA as one of two measures of academic merit. For my analysis, this variable is coded as a continuous scale variable with values ranging from 0.50 to 4.00.

In addition to grades, I analyze the impact of exam performance on racial wage gaps. Jencks and Phillips (1998) argue that standardized exam scores are a critical determinant of life opportunities. Indeed, Neal and Johnson (1996) and O’Neill (1990) posit that almost the entire wage gap between blacks and whites can be explained by variance in standardized scores. Rather than the numerical values of the scores
themselves (or, in many cases, even the fact that a job candidate ever took the exam), theorists argue that standardized exam scores are a more fair proxy for intellect and cognitive skills than are school grades, owing to the variance in standards and expectations for earning school grades. For this reason, I include standardized exam scores as independent variables. Standardized test scores for reading and math are represented by *reading standardized score* and *mathematics standardized score*. These two standardized exams are selected in lieu of SAT scores for several reasons: 1) These cognitive skills tests are administered to all survey participants regardless of whether they intend to enroll in college, so there are no missing data on these variables; 2) These exams are more likely than are SAT scores to accurately reflect acquired command of material rather than the payoff of specialized preparation; and 3) Bobbitt-Zeher (2008) finds that performance on these exams strongly influences gender gaps in income even after accounting for credentials, ascribed characteristics and occupational choice. In addition, Kilburn, Hanser and Klerman (1998) find that the percentile ranks of these exams are comparable to those of the Armed Forces Qualifying Test (AFQT) and National Assessment of Educational Progress (NAEP) standardized exams that have been used in other analyses of the relationship between education and occupational wages.

I next account for academic moderators that may impact the ability to translate earned credentials and level of achievement into labor market outcomes. An additional important variable that I include in my models is the selectivity level of one’s postsecondary institution of attendance. Brewer, Eide and Ehrenberg (1999) investigate the effect of school selectivity on wages in the 1970s and 1980s by analyzing data from
the National Longitudinal Study of the High School Class of 1972 and High School & Beyond. They conclude that not only does a wage premium exist for attending elite private schools, but that this benefit may even have increased over time. I estimate the effects of this factor using the variable \textit{college selectivity}. This ordinal variable is coded in graduating order, so that open enrollment schools are lowest on the selectivity scale and highest selectivity is coded highest.

The final academic moderator that I account for is \textit{detailed field for bachelor’s degree}. I adjust for the effect of this categorical variable so that inequality that is due to anticipated financial returns to fields of focus do not confound my overall results.

Occupational variables that I include in the model are \textit{industry of occupation} and \textit{current/previous occupational code}. Estimating the impacts of these related categorical variables permits me to distill the effects of academic success on racial wage inequality when the compared cases hold similar positions in comparable occupational fields.

Prior research has evidenced a market sector effect on income returns to earned credentials (Grodsky and Pager 2001). I introduce the variable \textit{employment sector} in order to estimate the sector effect on racial income inequality. This variable is coded 1 “public”, 2 “private”, 3 “government” and 4 “military”.

The last factor that I evaluate builds on Chapter 4’s evaluation of time to college completion. Taniguchi (2005) highlights the negative implications that delayed college completion has for career earnings. I posit that these ramifications should be visible in comparisons between working adults even if they otherwise have similar profiles, since
on-time graduates are likely to enter the full-time labor force sooner than their off-pace contemporaries and accumulate experience and network connections that correlate with better pay. I operationalize timely graduation as completion of requirements for a bachelor’s degree within four years of initial postsecondary enrollment and include it as a dummy variable in my models, coding respondents who earn college degrees in four years as “1” and all others as “0”.

**Analytical strategy**

I estimate the relationship between academic merit and wage inequality across races using ordinary least squares (OLS) regression. This method is appropriate for my analysis because my dependent variable is a continuous scale variable and I am able to estimate the monetary change in income that results from change in each independent variable in my models.

In Model 1, I show the effect of race on annual income using whites as the reference category. Model 2 introduces gender and SES as control variables. In Model 3, I evaluate the effect of highest level of academic attainment on racial variance in income, and I select people who report that their highest earned degree is a high school diploma as the reference category. Measures of academic merit -- high school GPA and both math and reading standardized exam scores -- are added to the equation in Model 4. The level of college selectivity for one’s postsecondary institution and the major are included in Model 5 in order to discern the influence of these variables on the credential
effect. Model 6 adds occupational factors -- field of employment and occupational title -- in order to account for the impact of occupation on racial wage inequality. I introduce employment sector in Model 7. Finally, Model 8 estimates the effect of timely college completion on annual earnings at age 25.

5.5 Results

I present the findings from my regressions in Table 5.3. Using these models, I reveal the additive effects of ascribed characteristics, academic credentials, academic merit, occupational factors and timing of college completion on racial gaps in income.

Significant income gaps are revealed in the unadjusted model (Model 1). Prior to accounting for any other variables, blacks lag behind whites by greater than $5700 in annual wages. The gap between whites and Hispanics is much smaller, but yet still very large at more than $3200 in favor of whites. The group that earns the most per year for full-time work is Asians, with an annual income that exceeds whites by approximately $3200.

In Model 2, the effects of gender and SES are controlled for. After accounting for these variables, all racial gaps are reduced notably. The black disadvantage relative to whites is reduced to approximately $3400 annually, a decline of $2300. The Hispanic disadvantage is reduced to by $2700 and falls to non-significance. Unlike the other two gaps, the Asian advantage over whites is reduced much more modestly and remains strongly significant at $2631. Both gender and SES of origin strongly predict income,
with SES accounting for almost $4000 worth of variance in annual income amongst full-
time earners and women earning almost $8800 less than their male counterparts net of
race and social class.

My third model measures the impact of academic attainment on racial gaps in
annual income, treating high school graduates as the reference group. Once I include
highest credential earned in the model, the race gap between whites and Asians, although
still sizeable at $1560, joins the coefficient for Hispanics in falling short of significance.
However, the black disadvantage relative to whites remains virtually unchanged,
contracting by less than $100. Overall, the highest level of credential achieved has a very
strong impact on wages. People who lack a high school diploma earn the least per year
relative to all others in the sample, grossing more than $6000 less than those who
complete high school. Advancing beyond high school pays off handsomely for those
who earn bachelor’s degrees (a gain of approximately $6300) and even better for people
who earn graduate degrees ($8200 more than those whose highest degree is high school),
but the payoff of attaining an associate’s degree, although positive compared to the
reference group, is not statistically significant.

I empirically examine the influence of measures of academic merit in Model 4.
Notably, the relationship between race and income remains similar to that revealed in
Model 3, as neither the Asian advantage over whites nor the Hispanic disadvantage rise
to a level of statistical significance. Blacks continue to lag behind whites by a margin in
excess of $3000 and academic merit accounts for only $200 of the gap. High school
grades do not have a significant effect on wages, while cognitive math skills are
significantly and positively correlated with income. Surprisingly, success on the standardized reading exam negatively impacts income after race, SES, gender and highest credentials are accounted for. The coefficient for this variable is consistently negative across models and is either significant or borderline significant in all cases. At first glance, this finding certainly is counterintuitive, as command of the English language is often treated as a primary indicator of intelligence in American society. Yet, the answer to this riddle may be found in work by Donna Bobbitt-Zeher, whose research on gender inequality in income reveals that females are much more likely to perform well on reading exams than are males, whereas males outperform their female counterparts on math exams (Bobbitt-Zeher 2008). Thus, the exam coefficients may reflect, in part, the gendered valuation of marketable skills.

The lack of explanatory power for high school GPA is worthy of additional mention. Rosenbaum (2001) attributes the lack of relationship between GPA and labor market outcomes on the notion that employers do not consider grades to be representative of anything more than ability to perform mundane tasks during adolescence. Miller (1998) finds that high school success predicts wages for workers approximately one decade after high school completion even after controlling for race, SES and college characteristics, a finding which supports the notion that traits that lead to success students who display aptitude in the classroom during high school are more likely than are lower-achieving peers to also display characteristics that are rewarded by employers. Given the existing research that acknowledges high school grades as evidence of work habits, ability to process information and a gauge of motivation, as well as empirical results that
show high school GPA to be a better predictor of college success for racial minorities than are standardized exams, employers might do well to heed Miller’s advice and take high school performances into account when evaluating candidates for open positions.

In Model 5, I introduce level of college selectivity to the equation and find that greater selectivity of one’s postsecondary institution is associated with a significant and positive increase in annual income among full-time earners. In addition, I control for college major and discover that choice of major also has significant ramifications for income. Neither of these variables meaningfully impacts the race gaps observed in previous models, and the black deficit relative to whites remains strongly significant.

The sixth model measures the influence of occupational factors on racial income inequality. Once again, these gaps remain virtually unmoved, although the black gap relative to whites is reduced by an additional $300 when compared to Model 5. Hispanics in the sample finally draw practically even with whites once variance in occupation is accounted for, but this estimate is far from statistically significant, as is the unchanged advantage that Asians hold over whites.

Model 7 evaluates the impact of employment sector on racial wage inequality. Controlling for this variable finally reduces the black income deficit below the $3000 threshold, to $2827. The non-significant Asian advantage over whites in the sample is reduced modestly, and Hispanics enjoy a negligibly greater and non-significant advantage over whites. Working in the private sector is found to be most lucrative, followed by relative deficits ranging from $3275 (for employees of city, state and federal
governments) to almost $5000 (for military personnel). Employees of non-profit organizations earn slightly more than $4100 less than their for-profit counterparts.

Lastly, Model 8 reveals a weak effect of timely college completion on racial income inequality. The black wage deficit is reduced to $2760, but remains strongly significant net of all other variables in the model. The Hispanic and Asian gaps increase marginally, but remain safely short of significance. The overall effect of timely college completion is quite strong, as respondents who earn bachelor’s degrees within four years of enrolling in college enjoy an income of greater than $4800 more than others who have not earned college degrees within this time frame.

5.6 Discussion

Race, meritocracy and income inequality

This research was undertaken to examine meritocratic assumptions about race and income inequality, namely Davis and Moore’s (1945) premise that earned credentials and differential talents are primary determinants of material and social imbalance. Of particular import is the question of whether, as some theorists claim, contemporary racial income inequality is the result of differences in premarket factors and occupational choice or if it is informed by deliberate or inadvertent discriminatory processes in the labor force. The results of my analysis cast a skeptical light on the former claim and support the latter position.
The major finding from this research stands out when comparing the race coefficients across the eight models in this analysis. While differences between whites, Asians and Hispanics ultimately fall from significance, the white-black income gap not only fails to follow suit, but actually is practically an immovable object. After controlling for gender and SES, the deficit for black full-time workers relative to whites is approximately $3400, and less than $700 of this gap is explained by the combination of credentials, academic merit, timing of college completion and occupational factors -- this gap is both large and powerfully resilient to the effects of academic merit.

A further assessment of the race coefficients across models reveals that factors that explain wage gaps for Hispanics and Asians when compared to whites are not uniform. For Hispanics, once SES and gender are accounted for, the deficit is no longer significant, and a slight advantage actually emerges as additional variables are included in subsequent models. This discovery has important implications for policies that aim to address racial inequality in earnings, as while coming from a socioeconomically disadvantaged background is a major factor in inequality between whites and non-Asian minorities, only for Hispanics is it the driving force for said inequality, while much of the black gap continues to go unexplained after accounting for social class of origin. Unlike blacks or Hispanics, Asians actually perform better than do whites; they begin as the highest-earning group in the sample and continue to lead the pack across all models. The difference between Asians and whites is no longer significant after highest level of academic attainment is controlled for, indicating that the Asian advantage in the overall
sample is due to the fact that this group is better-credentialed than all others in the analysis.

The results of my analysis insist upon the conclusion that, as Gans (1999) posits, racial stratification in the United States shows signs of moving from a white/non-white dichotomy to a black/non-black one. Even after measuring the effects of academic success and adjusting for both educational and occupational factors that might reasonably be expected to mute its impact, a major gap exists between blacks and all other racial groups, while these variables explain away the white disadvantage relative to Asians and the Hispanic shortcoming compared to whites. This finding directly and strongly contradicts the meritocratic assertion that contemporary wage gaps are attributable to skills gaps that can be bridged primarily by improving the ability of minorities to acquire these skills. Instead, my findings indicate that SES is a major determinant of future income for all races, and that cognitive skills and achievement do not come close to compensating for the remaining disparities, although the persistent white-Asian difference falls from significance after accounting for credentials.

In light of empirical evidence that skills and credentials do not explain the wage gaps between all racial groups in the United States, appropriate explanations for their persistence -- especially the strongly significant black/non-black difference -- are called for. To this end, I highlight several explanations found in existing literature. First, there is the factor of still-existing explicit discrimination such as that which Coleman (2003) identifies -- even when employees are evaluated as similar in productivity and value by their managers, a racial wage gap still emerges *after* these evaluations take place, to the
inexplicable disadvantage of minorities. Another explanation is that work experience may vary by race due to racial disparities at the hiring stage of the status attainment process (Maume 2004; Pager, Bonikowski and Western 2009); therefore, a cross-sectional evaluation of cohort members may yield incomes for people who are at different points in their careers even if they are the same age and completed their schooling at the same time. More subtle processes may depend on employers’ racialized assumptions about the career trajectories of racial minorities and whites even if they have similar profiles, which are especially meaningful during the early-career period due to lack of an extensive work history on which to evaluate employees as individuals; Alon and Haberfeld (2007) posit that employers may invest less in black females than in whites at the outset of their careers because they believe blacks to have less-refined skills and weaker commitment to their jobs than their white counterparts until a well-developed track record insists otherwise. Royster (2007) argues that social interactions and gender norms are a key factor that determines disadvantage for less affluent black males relative to less affluent whites, as black males are more likely to suffer negative consequences for enacting masculinity norms than are whites.

The abovementioned theories share a common theme that, while not dependent on malicious discriminatory actions, is no less problematic as an explanation for wage inequality among the similarly-qualified: whereas academic attainment is presumed to grant access to commensurate occupations, the reality is that credentials merely qualify one to enter a candidacy pool from which potential employers select future employees (consistent with Kerckhoff 1976’s recognition that status attainment is based on
allocation of gatekeepers rather than one that is driven by individual achievement); consistent with this, initial wages, subsequent raises and promotions are also determined by allocation rather than earned. While later career advancement is more clearly dependent on human capital that is acquired after entering the labor force (Tomaskovic-Devey, Thomas and Johnson 2005), early career allocation is based on imperfect information that is supplemented by racially biased assumptions of worker quality and market value (Alon and Haberfeld 2007), and these racialized assumptions -- not human capital -- are primarily accountable for racial income inequality.

5.7 Conclusion

In this chapter, I have empirically evidenced the weakness of academic merit as an explanation for racial wage inequality. I also have offered some reasons why the anticipated relationship between academic success and racial inequality in labor market outcomes falls short of expectations. Yet, I caution against dismissing the relevance of schooling altogether, as level of education clearly has a strong influence on the outcomes for members of all racial groups. Indeed, while the unexplained gap between blacks and whites in my analysis is not resolved by accounting for level of education or academic merit, some reductive effect is noted and the benefit to blacks is certainly not less than that afforded to whites. Furthermore, inclusion of high school grades and standardized exam scores in the model explains between $400 - $500 of the returns to bachelor’s and graduate degrees, so school success is not meaningless.
The results of this study call for three responses: First, in order to reconcile labor market outcomes with the ideology of upward mobility through hard work and dedication and, in so doing, to more substantially reduce racial wage inequality, both employees and employers would benefit from a strengthening of the relationship between academic achievement and early career outcomes (which, with all variables included in the overall model, account for only 11.4% of the variance in income); this is critical, because as Alon and Haberfeld (2007) acknowledge, lost wages due to substandard compensation early in one’s career is often irredeemable going forward, and employers would stand a better chance of identifying candidates who would be long-term assets to their businesses (Rosenbaum 2001; Miller 2005). Second, one of the themes of this dissertation is the importance of recognizing that different processes inform the racialization of economic disadvantage for blacks and Hispanics; this research highlights precisely the black/non-black dichotomy that Gans (1999) identifies, and researchers must be both extremely cautious about framing inequality research in terms of a white/non-white divide and diligent in identifying explanations for the divergent outcomes of racial minorities who otherwise share similar characteristics. Lastly, the negative relationship between literacy and wage compensation net of other factors -- discovered incidentally in my analysis -- deserves closer scrutiny.
<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Metric</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual income earned in 1999</td>
<td>All earned income in 1999</td>
<td>Scale</td>
<td>29339.33</td>
<td>20885.59</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no</td>
<td>.71</td>
<td>.45</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no</td>
<td>.10</td>
<td>.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no</td>
<td>.13</td>
<td>.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Dummy variable for respondent race (single race identification)</td>
<td>0 = no</td>
<td>.07</td>
<td>.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Dummy variable constructed from recoding of F4SEX.</td>
<td>0 = male</td>
<td>.47</td>
<td>.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = female</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Socioeconomic status</strong></td>
<td>Continuous measure constructed from parent survey that incorporates father's education level, mother's education level, father's occupation, mother's occupation, and family income</td>
<td>Scale</td>
<td>-.04</td>
<td>.79</td>
</tr>
<tr>
<td>Composite SES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Highest credential earned</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>Dummy variable recoded from category of “highest degree earned” variable</td>
<td>0 = no</td>
<td>.05</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school diploma</td>
<td>Dummy variable recoded from category of “highest degree earned” variable</td>
<td>0 = no</td>
<td>.53</td>
<td>.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associates degree</td>
<td>Dummy variable recoded from category of “highest degree earned” variable</td>
<td>0 = no</td>
<td>.07</td>
<td>.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>Dummy variable recoded from category of “highest degree earned” variable</td>
<td>0 = no</td>
<td>.31</td>
<td>.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grad/prof degree</td>
<td>Dummy variable recoded from category of “highest degree earned” variable</td>
<td>0 = no</td>
<td>.03</td>
<td>.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic merit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school GPA</td>
<td>Self-reported grade point average at the end of 12th grade</td>
<td>Scale</td>
<td>2.69</td>
<td>.76</td>
</tr>
<tr>
<td>Standardized reading exam</td>
<td>12th grade standardized exam scores rescaled by percentile rank</td>
<td>Scale</td>
<td>62.79</td>
<td>22.44</td>
</tr>
<tr>
<td>Standardized math exam</td>
<td>12th grade standardized exam scores rescaled by percentile rank</td>
<td>Scale</td>
<td>63.18</td>
<td>22.26</td>
</tr>
</tbody>
</table>

Table 5.1 Means, standard deviations and descriptions for variables used in analysis
<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Metric</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic moderators</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selectivity</td>
<td>Level of selectivity of first postsecondary institution</td>
<td>1 = open enrollment</td>
<td>2.56</td>
<td>.076</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 = highly selective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College major</td>
<td>Detailed field for bachelor’s degree</td>
<td>Categorical – 900</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>categories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed college in 4 years</td>
<td>Completed requirements for bachelor’s degree within 4 years of first postsecondary enrollment</td>
<td>0 = no</td>
<td>0.16</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry of occupation</td>
<td>Current or former occupational field</td>
<td>Categorical – 21</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>categories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational title</td>
<td>Current or former occupational code</td>
<td>Categorical – 42</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>categories</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employment sector</strong></td>
<td>Employed in private sector</td>
<td>0 = no</td>
<td>0.71</td>
<td>0.45</td>
</tr>
<tr>
<td>Private/ for-profit</td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-profit</td>
<td>Employed in non-profit organization</td>
<td>0 = no</td>
<td>0.07</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>Employed by municipal, state or federal government agency</td>
<td>0 = no</td>
<td>0.12</td>
<td>0.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Military</td>
<td>Employed as member of the United States military</td>
<td>0 = no</td>
<td>0.03</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1. income</td>
<td>1</td>
<td>2. white</td>
<td>.061</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 5.2: Correlations for variables in analysis
<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RACE (REF=WHITE)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(865.686)</td>
<td>(867.242)</td>
<td>(859.717)</td>
<td>(864.043)</td>
<td>(866.444)</td>
<td>(872.126)</td>
<td>(872.399)</td>
<td>(871.716)</td>
</tr>
<tr>
<td></td>
<td>(818.518)</td>
<td>(801.743)</td>
<td>(796.862)</td>
<td>(795.010)</td>
<td>(792.899)</td>
<td>(779.570)</td>
<td>(777.922)</td>
<td>(776.686)</td>
</tr>
<tr>
<td>Asian</td>
<td>3122.171**</td>
<td>2630.508*</td>
<td>1560.593</td>
<td>1286.244</td>
<td>1101.776</td>
<td>1055.492</td>
<td>1105.040</td>
<td>1109.040</td>
</tr>
<tr>
<td></td>
<td>(1117.730)</td>
<td>(1095.066)</td>
<td>(1085.816)</td>
<td>(1088.403)</td>
<td>(1094.250)</td>
<td>(1092.254)</td>
<td>(1095.009)</td>
<td>(1095.009)</td>
</tr>
<tr>
<td><strong>ASCRIBED CHARACTERISTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3982.074***</td>
<td>1868.630***</td>
<td>1717.310***</td>
<td>3151.959***</td>
<td>1719.755**</td>
<td>1628.616***</td>
<td>1510.122**</td>
<td>1516.532**</td>
</tr>
<tr>
<td><strong>HIGHEST CREDENTIAL (REF=HS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>-6057.521***</td>
<td>-6346.050***</td>
<td>-6285.863***</td>
<td>-6298.241***</td>
<td>-6685.941***</td>
<td>-6782.269***</td>
<td>-6782.269***</td>
<td>-6782.269***</td>
</tr>
<tr>
<td></td>
<td>(1263.132)</td>
<td>(1278.081)</td>
<td>(1290.834)</td>
<td>(1303.178)</td>
<td>(1303.178)</td>
<td>(1294.619)</td>
<td>(1292.323)</td>
<td>(1292.323)</td>
</tr>
<tr>
<td>Associates</td>
<td>1575.759</td>
<td>1546.238</td>
<td>1612.512</td>
<td>1577.689</td>
<td>1592.343</td>
<td>1627.766</td>
<td>1612.767</td>
<td>1627.766</td>
</tr>
<tr>
<td></td>
<td>(944.167)</td>
<td>(947.438)</td>
<td>(950.038)</td>
<td>(944.219)</td>
<td>(941.448)</td>
<td>(940.369)</td>
<td>(940.369)</td>
<td>(940.369)</td>
</tr>
<tr>
<td>Bachelors</td>
<td>6299.346***</td>
<td>5813.685***</td>
<td>6686.498***</td>
<td>6453.181***</td>
<td>6887.907**</td>
<td>7372.566**</td>
<td>7372.566**</td>
<td>7372.566**</td>
</tr>
<tr>
<td></td>
<td>(588.522)</td>
<td>(634.094)</td>
<td>(751.189)</td>
<td>(753.209)</td>
<td>(749.932)</td>
<td>(780.923)</td>
<td>(788.923)</td>
<td>(788.923)</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>8193.505***</td>
<td>7602.850***</td>
<td>8812.410***</td>
<td>8573.584***</td>
<td>9337.483**</td>
<td>1665.729**</td>
<td>1665.729**</td>
<td>1665.729**</td>
</tr>
<tr>
<td></td>
<td>(1500.264)</td>
<td>(1502.575)</td>
<td>(1522.456)</td>
<td>(1536.844)</td>
<td>(1565.525)</td>
<td>(1565.525)</td>
<td>(1565.525)</td>
<td>(1565.525)</td>
</tr>
<tr>
<td><strong>ACADEMIC MERIT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS GPA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>437.323</td>
<td>324.055</td>
<td>231.830</td>
<td>287.344</td>
<td>168.739</td>
<td>(389.789)</td>
<td>(416.412)</td>
<td>(425.635)</td>
</tr>
<tr>
<td>Reading score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-96.155*</td>
<td>-86.765*</td>
<td>-73.397*</td>
<td>-69.727*</td>
<td>-69.771*</td>
<td>(37.860)</td>
<td>(37.629)</td>
<td>(37.402)</td>
</tr>
<tr>
<td>Math score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>122.695*</td>
<td>112.667*</td>
<td>96.953*</td>
<td>92.259*</td>
<td>91.066*</td>
<td>(38.243)</td>
<td>(38.081)</td>
<td>(37.751)</td>
</tr>
</tbody>
</table>

Table 5.3: OLS regression of income for full-time employees in 1999 on race, SES, gender, credentials, academic merit, academic moderators, occupational factors and timing of college completion
Table 5.3 cont’d

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COLLEGE AND MAJOR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1169.089***</td>
<td>1034.034*</td>
<td>1004.964*</td>
<td>846.974*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(420.085)</td>
<td>(416.055)</td>
<td>(418.285)</td>
<td>(421.403)</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>controlled***</td>
<td>controlled***</td>
<td>controlled***</td>
<td>controlled***</td>
</tr>
<tr>
<td><strong>OCCUPATIONAL FACTORS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>controlled***</td>
<td>controlled***</td>
<td>controlled***</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>controlled***</td>
<td>controlled***</td>
<td>controlled***</td>
</tr>
<tr>
<td><strong>SECTOR (REF=PRIVATE)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nonprofit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-4109.877***</td>
<td>-4104.250***</td>
<td>-3199.886***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(967.467)</td>
<td>(967.731)</td>
<td>(854.538)</td>
</tr>
<tr>
<td>Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-3275.567***</td>
<td>-3199.886***</td>
<td>-3199.886***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(851.134)</td>
<td>(854.538)</td>
<td>(854.538)</td>
</tr>
<tr>
<td>Military</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-4788.126**</td>
<td>-4842.013**</td>
<td>-4842.013**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1547.262)</td>
<td>(1546.266)</td>
<td>(1546.266)</td>
</tr>
<tr>
<td><strong>TIME TO COLLEGE DEGREE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 year grad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>30211.289***</td>
<td>34145.351***</td>
<td>32186.654***</td>
<td>29370.136***</td>
<td>27045.277***</td>
<td>28133.042***</td>
<td>28089.708***</td>
<td>28756.370***</td>
</tr>
<tr>
<td></td>
<td>(292.911)</td>
<td>(373.726)</td>
<td>(430.789)</td>
<td>(1230.574)</td>
<td>(1411.842)</td>
<td>(1459.213)</td>
<td>(1425.562)</td>
<td>(1446.876)</td>
</tr>
<tr>
<td>N</td>
<td>~7240</td>
<td>~7240</td>
<td>~7240</td>
<td>~7240</td>
<td>~7240</td>
<td>~7240</td>
<td>~7240</td>
<td>~7240</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.009</td>
<td>.071</td>
<td>.091</td>
<td>.093</td>
<td>.096</td>
<td>.107</td>
<td>.112</td>
<td>.114</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001
CHAPTER 6: DISCUSSION and CONCLUSION

6.1 Diminishing returns to merit, increasing significance of race

Racial inequality in the United States has undeniably decreased on a number of important measures during the past half-century. Students of color now have greater opportunities to pursue education at the highest levels, and more are enrolling in college today than ever before. Occupations that once were the exclusive domain of whites now are accessible to racial minorities to a degree thought unimaginable just fifty years earlier. Despite these gains, however, large disparities still exist in educational attainment and labor market prosperity. Within a society that now openly celebrates its escape from many decades of racial oppression following the end of slavery, the idea that structural racial inequality still persists is unpalatable, and the clear disparities demand not only an explanation, but one that absolves society at large of the sin of continued discrimination.

At the center of the storm lies the fixed target of the American system of education. The common narrative is that the path to success is knowable and accessible, but that it is disparate acquisition of the knowledge and credentials that are valued in today’s economy that leads to the perpetuation of racial inequality. For this reason, the
institution of education is held to high account as a perpetuater and, indeed, exacerbator of societal inequality.

This dissertation examined the viability of the popular notion that inequality results primarily from racial disparities in academic success that impact the ability to thrive within what is a blindly meritocratic system of status attainment. Given the strong policy focus on improving compulsory education in the United States and reducing well-known racial gaps, I allowed the assumption that inequality in the status attainment process primarily occurs in the quest to earn a high school diploma, so I began by analyzing the relationship between academic merit -- proxied by high school grade point average and SAT scores -- and racial variance in timely college enrollment. Next, I examined the relationship between merit and duration between college enrollment and completion of requirements for a bachelor’s degree. Finally, I assessed the effects of academic credentials on racial income inequality, net of academic and occupational moderators.

A comparison of the findings from the three substantive chapters of this dissertation reveals that the importance of merit for ultimate success in the status attainment process is overstated in public discourse. In the case of timely college enrollment for high school graduates, the impact of race is reduced to an almost non-existent level once high school GPA and SAT scores are taken in combination. Even stronger is the influence of socioeconomic status, which not only explains the white advantage relative to blacks and Hispanics, but actually reveals whites to be the most underwhelming group when all students are equalized on this measure. Taken by itself,
this finding supports the premise that meritocracy prevails if students achieve well in school, perform well on exams and are not undermined by socioeconomic inequality.

While race does not appear to be a determining factor at the college admission stage of the status attainment process after ascription and achievement are accounted for, the claim of meritocratic order is greatly impaired by evidence from my analysis of time to degree completion. I found that measures of merit remained strong predictors of time to degree, but that while they reduced the observed race effect in the baseline model, disparities were still noticeable after equating respondents on these variables as well as gender and socioeconomic status. Furthermore, accounting for differences in high school characteristics such as urbanicity, academic rigor and whether the school was public or private further reduces race gaps, but racial inequality in timing of college completion still persists. From this, it is evident that demonstrated merit is more limited as an explanation for inequality after students enroll in college than during the admissions process.

While the influence of measures of merit on racial inequality was found to be strong for timing of college enrollment and somewhat less consequential in predicting time to college completion, the impact of academic success on racial wage gaps was surprisingly weak. A bivariate comparison between race and annual income for full-time earners revealed wide disparities between all racial groups. While controlling for gender and SES virtually eliminated the Hispanic disadvantage relative to whites, large deficits for blacks compared to whites and for whites compared to Asians remained. The Asian advantage over whites was no longer meaningful when academic credentials are equated,
but the black-white gap endured even after high school grades and cognitive skills were brought to balance. In the overall model, this gap was barely reduced after accounting for college major, college selectivity, occupation, employment sector and timeliness of college graduation, even though each of these variables had a strong and significant effect on income. Far from being the great equalizer that education is purported to be, its impact on the black-white income gap is astoundingly minimal.

The primary takeaway point from this comparison is a sobering one for anyone who subscribes to the theory that race matters in contemporary society primarily because of its influence on acquisition of skills and credentials: *demonstrated merit actually matters less as one progresses through the status attainment process, while race matters more*. Given that the inequities in this project occur during the relatively early stages of the status attainment process, it would not be surprising to discover that merit may continue to diminish in importance as people advance through the middle and latter stages of their occupational trajectories while ascribed status matters more (which is nothing new under the sun, given the abundance of research on glass ceilings that prevent women and racial minorities from ascending to leadership positions in many organizations). It also should not be unimaginable that racial inequality in the labor force may be uncovered on other measures of early-career success, such as attainment full-time employment itself, receipt of employment benefits, job retention or enjoyment of workplace environment.
6.2 Black and Hispanic outcomes -- different paths to subordinated status

The subordinate positions of blacks and Hispanics when measured against the success of whites and Asians stands out as a recurring theme throughout each of the three stages of the status attainment process that I assessed. However, the hierarchical order of blacks and Hispanics is not consistent across stages of the process. At the outset of the postsecondary school stage of the process, blacks enroll in a more timely manner than do Hispanic students; likewise, blacks progress through college at a faster pace than do Hispanics and are more likely to complete college degrees in my sample. Yet, while blacks perform better than do Hispanics in persistence from high school through college completion, they also earn lower wages even when the groups are equal on critical academic and occupational measures, and the Hispanic advantage is roughly equivalent to that held by whites over blacks.

The abovementioned results indicate that Hispanics are more likely than are blacks to be undone in the time period between completion of high school and earning a college degree, and that high performance on measures that are acknowledged as meritocratic by college admissions committees has a greater direct impact for blacks than for Hispanics. On the other hand, blacks are more likely than are Hispanics to meet with unequal pay for similar positions once they are able to attain them regardless of credentials or demonstrated academic or cognitive abilities. Here, we realize that meritocracy “cracks” at different points for each of these two groups, and that while solving inequities in the education system is a critical step in improving the fates of all
students, it is much less than sufficient in the case of blacks, who face an additional tier of disadvantage once they enter the labor market.

It is especially important to recognize and acknowledge that the factors that most strongly impact the likelihood of black students and Hispanic students to prosper in the status attainment process are not one and the same. In public discourse, much is made of diversity in universities and in the workplace, almost always with whites as the reference category and all other groups combined into the “other” category. What is discovered in this study is that aiming to improve minority representation in higher education requires great attention to factors that inform secondary school performance and graduation rates (for the most part, whomever is college-eligible is eventually enrolling in some kind of postsecondary institution, as indicated in Chapter 3), but that promoting successful college completion requires something more, especially for Hispanic students. Finally, it is clear that merely increasing access to higher education and better enabling college completion is not enough to eliminate the early career wage gap between blacks and other races, and that income attainment inequality is better recognized as a black/non-black dichotomy than as a white/non-white imbalance.

6.3 Timing isn’t everything -- but it matters

In addition to the abovementioned findings, one of the important discoveries in this dissertation is that not only does the eventuality of progress through the status attainment process matter for determining racial disparities in society, but the timing of
these transitions also is meaningful. In Chapter 3, the unadjusted model reveals a white advantage in timeliness of college enrollment relative to blacks and Hispanics. In turn, timeliness of college enrollment is found to have a strong and significant impact on timing of college completion in Chapter 4. Finally, we see in Chapter 5 that timely college graduation has a major effect on wages.

In both time-dependent analyses in Chapters 3 and 4, Asians and whites transition through the status attainment process faster than do blacks and Hispanics in unadjusted models. In multivariate analyses, results revealed that, due to a combination of factors that favor whites and Asians, blacks and Hispanics are much more likely to progress slowly through the status attainment process even if they ultimately do enroll in college, earn bachelor’s degrees and attain full-time employment. In turn, this greater likelihood of delay contributes to the wage disadvantage for blacks and Hispanics. In contrast, when compared to their black and Hispanic counterparts, whites and Asians are more likely to hold higher credentials and to earn higher wages by age 26.

6.4 Sponsored mobility – explaining the diminishing effect of merit

The inequalities that are identified in this project demand an explanation, some reason why what is supposed to be the cure for all that ails non-Asian minorities in the status attainment process falls well short of meeting that promise. Certainly, evidence supports continued efforts to reduce achievement gaps between racial groups as an important step toward eradicating racial inequities at various stages of the status
attainment process, but additional explanations are necessary for the uneven relationship between school success and educational and occupational attainment. Furthermore, the phenomenon identified earlier in this chapter must somehow be related to each other in a meaningful way.

*The function of education in the status attainment process*

At first glance, it might be intuitive to cite the length of time between the completion of high school and the transition points that I measure in the three substantive chapters herein as a prime explanation for the diminishing importance of these variables; if this is the case, then the meritocratic argument lives, and our search for new factors must center on additional measures of merit that are specific to each new stage. However, in light of Miller’s (1995) finding that high school academic performance is positively and significantly correlated with variance in income many years after employees enter the labor force, Alon and Haverfeld’s (2007) thesis that racialized assumptions are more a factor in informing noted disparities than is diminished applicability of skills that predict high school success is more plausible.

Allowing for the high probability that the ability to translate education into occupational success is, to some degree, dependent upon external actors implores us to critically consider what education truly means in the status attainment process. Meritocratic arguments are strong only if we assume that status attainment is based upon achieved status rather than allocation, but this assumption is demonstrably flawed. In our
collective enthusiasm for the value of self-determination, we often overlook the limitations of the opportunity structure within which social climbers must strive to achieve their goals – it is possible for an individual to ascend from humble beginnings to some elite position, but there are only so many such positions available, and we can’t all have access to them, no matter how well-qualified we are. The unfortunate reality is that academic attainment guarantees nothing but the opportunity to compete for valued positions with others who are at least equally credentialed, and allocation of those opportunities is determined by a subsequent sorting process that is much less dependent upon the demonstrated abilities of candidates than would be ideal.

*The importance of social sponsorship in the status attainment process*

Within a mobility system that is dependent on allocation, it is a safe assumption that opportunities will disproportionately go to members of the most powerful groups in society first, while members of subordinate groups compete for remaining chances (Raftery and Hout 1993). Contrary to assumptions that the status attainment process is inherently meritocratic unless corrupted by discrimination, I argue, in unison with Bonilla-Silva (2001), that ours is a racialized social system that requires effort in order to alter the trajectory that so strongly favors whites. In short, eligible whites will benefit from assumptions that advantage them in pursuit of life chances unless deliberate action is taken to prevent this pattern from recurring.
The mediating factor that determines how education translates into next-level success is social sponsorship. As one progresses through the status attainment process, the stakes for right or wrong decisions for both the candidates and the gatekeepers become increasingly higher. Faced with this reality, the safest option for even the most well-intentioned gatekeeper is to offer opportunities to those who fit the assumed profiles of successful selections, which Alon and Haverfeld (2007) identify as heavily dependent on racial stereotypes. Efforts to mute the effects of these assumptions on status attainment benefit greatly from the advocacy of social sponsors – people of influence who are willing to put their reputations on the line to champion the causes of those who otherwise would be overlooked or, in some cases, those who make rules that govern the behaviors of potential social sponsors. To these powerful intermediaries, a major function of education in the status attainment process is to serve as a signal for potential social sponsors that a candidate is worth taking a risk on.

In practice, social sponsors violate meritocratic assumptions of what matters in the opportunity structure frequently. In addition to successful advertisement of human capital – the possession of valued skills and knowledge that are rewarded in the labor market, candidates for sponsorship are evaluated based on social capital – their ties to important networks of influential actors – and cultural capital, their understanding of the unstated rules for gaining favor with gatekeepers. Society at large is comfortable with meritocratic assumptions that elevate the importance of reliance on human capital, because the system of education promises to deliver to the market employees who possess the requisite skills that it is assumed they must develop in order to earn their
degrees. Ostensibly, if a candidate with a desirable track record falls short of expectations, then the fault is with the evaluative system that represented this person as being prepared for the task at hand rather than with the gatekeeper who selected him or her for the opportunity, and flawed systems of evaluation can be repaired. However, if selection and allocation are based upon unspoken factors and social proximity to deciders, this problem presents a different set of challenges, because the solutions to improving the prospects of underserved groups require either reforms to regulations of gatekeepers or, more dramatically (and probably more effectively), a diversifying of those who hold social sponsorship power.

In the studies that comprise this dissertation, evidence for the effectiveness these two approaches is discovered. At the college entry stage, Affirmative Action regulations, coupled with a wider availability of postsecondary opportunities at several levels, have given rise to a “college-for-all” system of higher education (Rosenbaum 2001) in which being a racial minority might even be beneficial for assuring eventual entry into college. Lest there be doubt about the importance of these policies in driving this rise in college enrollment among minorities, we may behold the dramatic decline in acceptance of non-white students in the University of California system after an voter-supported amendment to that state constitution outlawed consideration of race in the college admission process in the mid-1990s, as discussed in Chapter 2. By and large, public policy has not yet turned away from advancing the cause of campus diversity through federal influence on the admissions process, and a more meritocratic balance at this stage is the result.
While access to higher education has been greatly improved for minority students who are interested in attending and enrollment rates for black and Hispanic students are at least on par with those of white and Asian students who achieve at similar levels, this has not translated into a comparable increase in minority graduates from colleges in the United States. Here, theorists who argue for meritocracy might find favor with the observation that, in terms of measures of academic merit that are most highly-valued in the admissions process, black and Hispanic students arrive on college campuses less-prepared than their white and Asian counterparts for college success. This argument weakens somewhat when it is shown that non-Asian minorities who achieve at comparable levels to their white and Asian colleagues in high school nevertheless lag behind in timing of college completion, even net of factors such as high school rigor and family socioeconomic status. Clearly, something else must be accountable for the diminished relationship between academic merit and success as groups advance through the status attainment process.

I argue that what explains this weakened importance of merit is not a lesser applicability of skills that predict success at these levels; on the contrary, the institution of education explicitly concedes that skills gained in high school are viable as predictors of success in earning highest credentials, as evidenced by the fact that the Graduate Record Examination – the preeminent entrance exam for graduate school hopefuls in many disciplines, requires not more than high school-level competence in mathematics in order to score well. Rather, it is the dual impact of less systematic regulation of gatekeepers and a decreasing degree of diversity among social sponsors that is to be held
accountable. For students of color who have demonstrated comparable ability and level of preparedness for college-level work relative to their white peers, the feeling of belonging in the surrounding environment may make the difference between a successful college career that results in graduation as opposed to a transfer to another institution or an exit from the system of higher education altogether. A recent report on graduation rates of black students in the United States identifies several factors that potentially affect the success rates of black students despite their level of academic preparation, including the percentage of minority students enrolled at an institution, the demographics of the geographic location of a campus, and the existence of on-campus mentoring and retention programs that specifically serve racial minority students (Journal of Blacks in Higher Education 2012). To this number, I add the importance of having a racially and ethnically diverse faculty that can serve as mentors, motivators and role models for students who encounter them, as Palmer, Davis and Maramba (2010) report that underprepared black males who enroll in historically black colleges and universities (HBCUs) and persist through graduation attribute their success in large part to these influences. It is not a surprise that colleges at which such support systems exist – at which social sponsors within the administration have asserted agency on behalf of minority students – success rates are higher, nor should it be surprising that the ability of several HBCUs to return a higher rate of college completion for black students despite typically being less well-resourced than other institutions is attributed to this sponsorship.

The importance of social sponsorship is greatest once students become entrants into the labor force. Candidates arrive at this point with their premarket profiles set and
step forward to be evaluated by gatekeepers who determine what the value of their academic achievements should be and how they might offset other perceived shortcomings of racial group membership. Here do we see the forces of discrimination in full display, as recent work on bias in the hiring process (Pager 2003; Pager, Bonikowski and Western 2009) so clearly demonstrates. For those who do attain full-time jobs, it is almost as if evaluators forget that they have histories that may be relied on to determine their worth, as racialized assumptions about the likely career prospects of workers sentence blacks to weaker compensation for similar work, and they never are able to fully recover from this altering of trajectory (Alon and Haverfeld 2007).

When all candidates for a position hold like credentials, justifications such as command or lack of “soft skills” or other attributes that set blacks aside as culturally incongruent with normative values are set forth as reasons that inequality persists; yet, this does not explain why skills that are directly relevant to occupations fail to explain inequalities in the unregulated private sector, even as meritocratic allocation appears to be much more the hallmark of the Affirmative Action-bound public sector (Grodsky and Pager 2001). Even in some instances in which minority workers are evaluated as comparable in productivity and value to their white counterparts, we yet see disparate rewards being delivered to them by gatekeepers (Coleman 2003). Perhaps most alarming, the arrival of minorities in positions of authority is not found to reduce labor market inequality due to the relatively muted powers of minority supervisors, who are given more menial tasks than are their white counterparts and also are more susceptible to layoffs (Maume 2012). Surely, sustainable equality in both title and influence are
necessary for minority gatekeepers to more effectively serve as the social sponsors that are needed to break the back of inequality in the American labor market.

6.5 CONCLUSION

In today’s America, we find ourselves at a crossroads, as social inequality has risen to the fore of public consciousness in the wake of the crushing Great Recession. As the cost of education to both students’ families and institutions continues to escalate, the role of education in determining future inequalities is central to debates about how to reinvigorate the American economy and prepare workers to meet the demands of a postindustrial society.

As our society moves forward in pursuit of a more ideal opportunity structure that enables access to prominent positions for all who are talented and motivated without regard to race, social class, gender or other ascribed statuses, it is essential that we take hold of the understanding that racial inequality in society is as much informed by non-meritocratic factors as by academic outcomes. We must acknowledge that the work of leveling the playing field does not end the moment that diplomas are handed to the students who have earned them.

Some who assess the findings of this study may argue that I have not given meritocracy a fair shot, and that there are doubtless other variables that must be accounted for before it can be viably concluded that we do not truly control our own destinies. Perhaps the measures of merit that I identify are not the best operational
measures of true ability and value, or maybe the race effects that remain strongly
significant in my analyses can be explained by variables such as aspirations or different
value systems that lead some who have earned the keys to prosperity to choose to enter a
different door. To these objections, I answer that the merit equation that I evaluate in this
study -- the origin-education-destination (OED) model of status attainment -- is the one
that has been offered in place of acknowledgement of continued discrimination by
theorists and policy-makers alike, and that the measures I include are the ones that are
purported to determine the outcomes that decide the life trajectories of these respondents,
their children, and their children’s children. Repeatedly, members of underserved racial
groups are given justifications for their disadvantages that deny race as a direct factor --
they hear that it is not their race, but rather their socioeconomic status, or their level of
education, or their level of achievement, or their cultural values, or any number of factors
that, while predicted by race, are not inherently determined by it. They are told to work
hard, to read, write, calculate, analyze and articulate their way to equality, and that they
have no one to blame but themselves if they fail to get there. In this dissertation, I take
aim at these arguments and find them wanting, and I am left with no choice but to
conclude that much improvement must be made before the status attainment process in
the United States can accurately be deemed meritocratic.
REFERENCES


Bobbitt-Zeher, Donna. 2008. “Gender, higher education, and earnings inequality.” PhD dissertation, Department of Sociology, The Ohio State University, Columbus, Ohio.


APPENDIX A

<table>
<thead>
<tr>
<th></th>
<th>Academic measures</th>
<th>Ascribed factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GPA</td>
<td>SAT</td>
</tr>
<tr>
<td>White</td>
<td>2.78</td>
<td>897.77</td>
</tr>
<tr>
<td>Black</td>
<td>2.46</td>
<td>803.71</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2.60</td>
<td>832.14</td>
</tr>
<tr>
<td>Asian</td>
<td>2.99</td>
<td>961.83</td>
</tr>
<tr>
<td>Total</td>
<td>2.74</td>
<td>884.20</td>
</tr>
</tbody>
</table>

Table A.1: Means for academic measures and background factors by race

<table>
<thead>
<tr>
<th>GPA Category</th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>D or F (0.50 – 1.99)</td>
<td>14.9%</td>
<td>28.0%</td>
<td>21.1%</td>
<td>8.9%</td>
</tr>
<tr>
<td>C (2.00 – 2.66)</td>
<td>44.5%</td>
<td>46.3%</td>
<td>48.7%</td>
<td>39.4%</td>
</tr>
<tr>
<td>B (2.67 – 3.32)</td>
<td>20.4%</td>
<td>14.8%</td>
<td>16.4%</td>
<td>22.3%</td>
</tr>
<tr>
<td>A (3.33 – 4.00)</td>
<td>20.2%</td>
<td>10.9%</td>
<td>13.8%</td>
<td>29.4%</td>
</tr>
</tbody>
</table>

Table A.2: High school GPA category by race
<table>
<thead>
<tr>
<th>Race</th>
<th>GPA</th>
<th>Within 1 year of graduating HS</th>
<th>More than 1 year after graduating HS</th>
<th>Not yet enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D or F</td>
<td>0.50 – 1.99</td>
<td>41.70%</td>
<td>18.90%</td>
</tr>
<tr>
<td></td>
<td>(black)</td>
<td>47.40%</td>
<td>19.20%</td>
<td>33.40%</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>45.00%</td>
<td>22.90%</td>
<td>32.10%</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>71.90%</td>
<td>12.10%</td>
<td>16.00%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>2.00 – 2.66</td>
<td>66.20%</td>
<td>13.40%</td>
</tr>
<tr>
<td></td>
<td>(black)</td>
<td>63.20%</td>
<td>15.60%</td>
<td>21.20%</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>62.70%</td>
<td>16.50%</td>
<td>20.90%</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>78.50%</td>
<td>12.20%</td>
<td>9.40%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>2.67 – 3.32</td>
<td>81.40%</td>
<td>7.60%</td>
</tr>
<tr>
<td></td>
<td>(black)</td>
<td>77.10%</td>
<td>8.00%</td>
<td>15.00%</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>70.20%</td>
<td>12.00%</td>
<td>17.80%</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>91.10%</td>
<td>4.80%</td>
<td>3.70%</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>3.33 – 4.00</td>
<td>87.60%</td>
<td>4.90%</td>
</tr>
<tr>
<td></td>
<td>(black)</td>
<td>74.00%</td>
<td>11.20%</td>
<td>14.80%</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>76.60%</td>
<td>11.10%</td>
<td>12.30%</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>94.70%</td>
<td>3.70%</td>
<td>1.60%</td>
</tr>
</tbody>
</table>

Table A.3: Timing of college enrollment by race and high school GPA
### APPENDIX B

<table>
<thead>
<tr>
<th>Description</th>
<th>Variable name</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race</strong></td>
<td>F4RACE</td>
<td>Respondent's race (old definition)</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td>F4SEX</td>
<td>Respondent's sex</td>
</tr>
<tr>
<td></td>
<td>F2SES1</td>
<td>HS senior year SES</td>
</tr>
<tr>
<td><strong>Duration to academic milestones</strong></td>
<td>DELAY</td>
<td>Time between HS grad and college enrollment</td>
</tr>
<tr>
<td></td>
<td>BACHTM2</td>
<td>Time between college enrollment and completion of requirements for B.A. or B.S.</td>
</tr>
<tr>
<td><strong>High School characteristics</strong></td>
<td>PHSDIV</td>
<td>Census division of HS</td>
</tr>
<tr>
<td></td>
<td>HSTYPE</td>
<td>HS type (public/private)</td>
</tr>
<tr>
<td></td>
<td>ACCURHSQ</td>
<td>High School academic intensity quintile</td>
</tr>
<tr>
<td></td>
<td>PHSURBAN</td>
<td>Urbanicity of HS</td>
</tr>
<tr>
<td><strong>Postsecondary school characteristics</strong></td>
<td>STATERES</td>
<td>State of HS vs. state of 1st postsecondary school</td>
</tr>
<tr>
<td></td>
<td>PSEFIRTY</td>
<td>Inst type of first PSE enrollment</td>
</tr>
<tr>
<td></td>
<td>REFSELCT</td>
<td>Selectivity of 1st PS institute</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td>HSGPAV</td>
<td>HS GPA</td>
</tr>
<tr>
<td></td>
<td>F22XRSTD</td>
<td>Standardized reading exam scores</td>
</tr>
<tr>
<td></td>
<td>F22XMSTD</td>
<td>Standardized math exam scores</td>
</tr>
<tr>
<td></td>
<td>F22XSSTD</td>
<td>Standardized science exam scores</td>
</tr>
<tr>
<td></td>
<td>SATREVS</td>
<td>Revised SAT/ACT equated</td>
</tr>
<tr>
<td></td>
<td>HDEGS</td>
<td>Highest degree earned</td>
</tr>
<tr>
<td></td>
<td>MAJCOD4</td>
<td>Detailed field for Bachelor's degree</td>
</tr>
<tr>
<td><strong>Occupational characteristics</strong></td>
<td>F4AACTF</td>
<td>Current activity full-time job</td>
</tr>
<tr>
<td></td>
<td>F4BWFOR</td>
<td>Employer type working for</td>
</tr>
<tr>
<td></td>
<td>INDUS99</td>
<td>Industry of Occupation, 1999</td>
</tr>
<tr>
<td></td>
<td>F4BXCRC</td>
<td>Recoded current/previous occupation code</td>
</tr>
<tr>
<td></td>
<td>F4BWSWK</td>
<td>Weeks worked in 1999</td>
</tr>
<tr>
<td></td>
<td>F4BLHPW</td>
<td>Hours per typical week all jobs 1999</td>
</tr>
<tr>
<td></td>
<td>F4HI99</td>
<td>Income of respondent, 1999</td>
</tr>
</tbody>
</table>

Table B.1: Base variables used in analysis (National Education Longitudinal Study, 1988 – 2000)