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Racial and Gender Differences in College Completion Among Minority Students: A Social Network Approach

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ABSTRACT

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College enrollment has improved among Black and Latino students during the last several decades due partly to the influence of formal and informal mentors and increasing parental support of higher education. However, college completion for these underrepresented minority groups continues to lag behind graduation rates for White students. This research sought to examine whether pre-college relationships influence college completion. Using data from the National Longitudinal Study of Freshmen, this study tested the direct and indirect effects of social capital from pre-college networks, including parental capital and mentor capital, race and gender on college completion utilizing logistic regression. The results indicated that one form of parental capital, parental education, is positively associated with college completion for all students. Three forms of parental capital, however, were positively associated with completion for Black students. Contrary to hypothesis, mentor capital was not a significant predictor of graduation for any group. Furthermore, Black and Latina women graduated at higher rates and received more parental support for academic performance than their male counterparts. Implications for future research are discussed.

Keywords: Blacks, Latinos, underrepresented minorities, gender, college completion, social capital, higher education, mentors, parental capital

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INTRODUCTION

Despite increasing rates of college entrance, Black and Latino students are still completing college at much lower rates than their racial counterparts. A recent study found that only 40% of Black students who enter college actually graduate, compared to more than 60% of White students (Guiffrida and Douthit 2010). Other research suggests that of children currently enrolled in kindergarten, 49 percent of Asians and 30 percent of Whites will grow up to earn a bachelor's degree, while only 16 percent of Blacks and 6 percent of Latinos will do the same. Even more alarming, Latino college graduation rates have remained stagnant since 1990 (Desmond and Turley 2009). These data reflect a state of emergency for Black and Latino families, as chances for long-term economic stability are inhibited by the lack of higher education.

Disparities in higher education attainment can be delineated through a three-tier process in what Rios-Aguilar and Deil-Amen (2012) outline as the "Getting In, Fitting In and Moving On stages." Asian students have been successful throughout the entire college process primarily because of resources from their parental networks, namely high socioeconomic status, parental education and high parental expectations (Vartanian et al. 2007). Over the past 50 years, Blacks and Latinos have made improvements in the "Getting In" (precollege planning and choice) stage, largely due to accessing higher quality capital from their social networks or acquiring new, capital-rich networks such as those available in federal TRIO programs (Engle et al. 2006). These same pre-college social networks (home social networks) assist Black and Latino students in the "Fitting In" (college adjustment) stage by, first, assisting with transitioning across cultures as they leave their home communities and enter predominantly white institutions of higher education (PWIs) and, second, compensating as students encounter barriers to critical networks

on their college campuses. Students rely on these home networks (family and community of origin mentors) for both tangible support, such as financial resources, and non-tangible support, including academic advising, assistance managing stress, general encouragement and cultural replenishment (Gonzalez 2002; Cabrera et al 1999; Guiffrida 2005b; Allen 1992). However, the role that home social networks and the capital embedded in them play for underrepresented (Black and Latino) and other minority students in the "Moving On" stage (graduation and post-college planning) is currently under-studied.

In order to address this gap in the literature, I examined the impact of underrepresented minority college students' home social networks on 4-year college completion using data from the National Longitudinal Survey of Freshman (NLSF). The research questions addressed in this thesis are as follows:

1. In what ways and to what extent does parental social capital impact college graduation for underrepresented minority students?
2. How do community-of-origin mentors influence the likelihood of college graduation for underrepresented minority students?
3. How do home social networks and the capital embedded in them operate differently for underrepresented minority males and females in relation to graduation?

This research makes an important addition to the current literature in a variety of ways. First, I completed a comprehensive analysis of multiple minority groups across a large sample of selective universities, in comparison to many studies that examine individual subgroups (i.e., Latinas or African American males) at single institutions (Rios-Aguilar and Deil-Amen 2012; Ceja 2004; Guiffrida 2005a). Second, I examined how two types of pre-college social networks – parental networks and informal mentor networks – influence college graduation. This adds to an

emerging body of research that examines for minority students important elements of communities of origin, which serve as anchors and motivations for students throughout their entire education and post-education processes (Pretty Paint 2009; Bernal 2001). Third, I identified how gender affects the type of social capital students receive from their home networks and how gendered social capital influences college graduation rates within each racial group. Until now, researchers have recognized that there are gender differences in graduation rates, particularly among Latinos and African Americans, but how these disparities relate to gendered experiences in social networks has not been explored. Lastly, this thesis adds to the literature that moves beyond deficit-model analyses for minority and low-income peoples. This study adopts the cultural integrity approach outlined in Rios-Aguilar and Deil-Amen (2012), which recognizes that all groups have social capital embedded in their networks that can be mobilized to produce important educational benefits.

Findings from this study also add to the practical toolbox for higher education practitioners in retaining at-risk populations. Most colleges and universities dedicate at least moderate resources to recruiting underrepresented students of color, but retention of these students is deficient (Eimers and Pike 1997). Discovering how assets that students bring with them can be employed to increase completion is cost and energy efficient for institutions and healthy for the student. Recognizing the intrinsic value in minority students' social networks may also go a long way in building better relationships between underrepresented minority communities and institutions of higher education. Furthermore, increasing college graduation rates among African American and Latino populations leads to increased economic prosperity, health and family stability for the largest ethnic groups in the United States.

BACKGROUND

Student Retention

College student retention and college completion are central issues in sociology of education. Since Durkheim's work on suicide and Marx's studies on capitalism, the study of social relationships, social status and stratification have been fundamental to sociology. College completion is of particular interest, therefore, because college graduation is directly related to social status and stratification as both an explanatory force and an outcome. Over the past four decades education scholars have dedicated substantial energies to addressing the social processes and relationships that affect social inequalities in student retention and college completion (Tierney 1992; Nora 2001; Engle and Tinto 2008). The most widely accepted theory on college student departure was established by Vincent Tinto in the early 1980s and has been the basis for research on minority and majority students. Tinto's initial theory contended that social and academic integration into college were the principal components in students' commitment to complete their degree, and this integration was most likely as students broke away from past (home) associations and developed new relationships on campus. Tinto and others (Engle and Tinto 2008; Guiffrida 2006) have found that this initial theory is most applicable to middle-class, white students and have adapted it to better predict student departure for first-generation, low-income and ethnic minority students.

Engle, Bermeo and (2006) add financial support and cultural adaptation to academic and social integration as requisites for persistence of low-income, first-generation students (who tend to be largely African American and Hispanic) (Figure 1). Race scholars also emphasize these factors for ethnic minority students and note that comprehensive integration depends on the amount of social capital students can attain or "the[ir] ability to secure benefits by virtue of

membership in social networks" (Gaddis 2012). In other words, minority students' likelihood of completing college is directly related to the depth of their social networks. Unfortunately, Black and Latino students often are unable to access the social networks that aid in college completion, namely, student-faculty relationships (Pretty Paint 2009; Eimers and Pike 1997). This is particularly true at predominately White institutions (PWIs) (Guiffrida and Douthit 2010). Both Latino students and Black students report a lack of culturally inclusive curricula (Guiffrida and Douthit 2010; Bernal 2001) and feel culturally isolated from faculty, not only making social and academic integration unlikely, but cultural adaptation difficult (Engle et al 2006). Social integration and cultural adaptation is further challenged by the fact that minorities often find the campus climate at PWIs to be culturally hostile and may battle stereotype threat to stay in school. Stereotype threat is defined as "the idea that persons who belong to a group for which there is a negative stereotype about them may be vulnerable to underperformance in the domain to which the stereotype pertains, particularly if this domain is important to their identity" (Fischer 2010: 20). As students of color face stereotype threat at PWIs, relationships that can shield students from this threat become particularly important. Minority faculty serves as buffers against this through advising, advocating for students and encouraging students to believe in their own academic abilities (Guiffrida and Douthit 2010; Fischer 2010). However, because minority faculty are rare at PWIs, Black and Latino students at these institutions may have few resources to combat this type of challenge. In these circumstances, support from students' communities-of-origins can be vital to persistence.

In addition to low numbers of minority faculty, the type of institution students choose to attend affects graduation rates. Private universities and small liberal arts college graduate students at a much higher rate than public universities. This is attributed to smaller class sizes,

strong sense of community and residence life and higher per-student spending on outreach programs that encourage graduation (Bowen, Chingos and McPherson 2011). In general, public colleges and universities graduate students at about a 10% lower rate than private institutions. This disparity is further exacerbated by race, where Blacks at public institutions may graduate at 15-20% lower rates than Whites and Asians. Unfortunately, most Hispanic and Black students who pursue 4-year degrees do so at public universities (DeAngelo et al. 2011).

Parental and Community Networks in the College Process

The role of parents in the college enrollment process is well established. Parental aspirations, parents' education and socioeconomic status are critical in determining various aspects of college entrance including whether students apply to college (Desmond and Turley 2009) whether they attend (Vartanian et al. 2007), and in what type of institution (e.g., 2-year vs. 4-year) students enroll (Engle and Tinto 2008; Engle, Bermeo and O'Brien 2006). Regardless of racial or gender differences, parental networks are central in determining whether or not students begin the college process.

Scholars also draw attention to the potential capital embedded in parental and home community networks that could assist students, especially students of color, to adapt to college. Because minority students do not see their cultures reflected and reinforced in higher education institutions, breaking ties to networks from their home communities may be detrimental to students of color because it requires them to separate from cultural traditions and supportive relationships that reinforce their bicultural integration into college (Guiffrida 2006; Tierney 1992). Minority families offer an important catalog of adaptive strategies as family members transition from one environment to another. One of the most vital tools they offer is biculturalism, the ability to "function optimally in more than one cultural context and to switch

repertoires of behavior appropriately and adaptively according to the situation" (Harrison et al. 1990). In addition to socialization, family relationships provide minority students with companionship and protection and, in many instances, are the most influential and positive force for graduation (Pretty Paint 2009; Guiffrida 2005a). Even more interesting, attitudinal support from family can be so influential that it often compensates for a lack of parental education and a low socioeconomic status, the two factors many researchers feel are most important in predicting educational attainment (Vartanian et al. 2007; Desmond and Turley 2009; Guiffrida 2005a).

A large body of research illustrates how families and community members play a compensatory role for Black and Latino students. For example, in a qualitative analysis of Chicano students at a predominantly white institution, Gonzalez (2002) found that a lack of cultural representations in the academic, social and physical realms on campus prompted Chicano students to seek cultural replenishment from connection to their music, other Chicano students, their families, and other relationships from their home communities. Others have found that family connections and pre-college associations facilitate the academic and social transition to college (Cabrera et al 1999; Melendez and Melendez 2010; Engle, Bermeo and O'Brien 2006); compensate for poor college academic performance (Cabrera et al. 1999); and predict persistence to graduation for students at primarily white institutions (Cabrera et al 1999; Eimers and Pike 1997; Gloria et al 2005; Hendricks et al 1996; Hurtado and Carter 1997; Nora 2001; Nora and Cabrera 1996; Rosas and Hambrick 2002). Bernal (2001) also makes the important point that not only do minority students receive support from their home communities, these communities provide sources of motivation for students to complete college in order to return and "give back," enhancing the importance of understanding the role of minority home social networks (Huffman 2001; Guiffrida 2005a; Engle, Bermeo and O'Brien 2006).

The role of family, however, is not without debate. In a study of 99 African American students at a Predominately White Institution, graduating students saw their families as critical assets to their college success, while those who left or struggled academically saw their families as contributing to their attrition (Guiffrida 2005a). This is important because some students who left indicated that even though parents were verbally supportive of them attending college, they were unwilling or unable to make the economic sacrifice to keep the students in school, indicating that parental aspirations may not be able to mediate socioeconomic status.

Familial influence also varies by immigrant status. Research on immigrant families suggests that families with at least one immigrant parent believe more strongly in an open opportunity structure than native-born minorities. These families then produce capital in the form of attitudes and educational behaviors that lead to higher rates of academic achievement for their youth (Vartanian et al. 2007). For Latinos, the immigrant family and the co-ethnic community work together to produce social capital that has proven to be protective against educational threats such as negative peer networks that discourage academic achievement (Portes and Rumbaut 2006). However, Latino immigrant families have also been found to hinder educational attainment when the parents have less than a high school diploma. Obviously, the wide variation in the role of the family justifies further investigation into which characteristics are key in encouraging college graduation.

Mentors

Research suggests that mentors are critical in the academic success of minority students during childhood and adolescence. Many studies have highlighted the effects of formal mentors from community-based programs, but a large body of literature also establishes the important role of informal mentors in the academic lives of minority students (Erickson, McDonald and

Elder 2009; Hall 2006; Rhodes, Ebert and Fisher 1992). Informal mentors can provide emotional support, financial resources, skill building and social connections, all vital to educational success among Blacks and Latinos. Erickson, McDonald and Elder (2009) highlight research on Mexican American youth who identify emotional support as the most important asset their informal mentors offered. Stanton-Salazar and Spina's (2003) research on low-income, immigrant Latino youth echo the importance of informal mentors, finding that informal mentors effectively model behaviors that assist adolescents in developing identity and social competencies as well as offer moral and social support.

Most research on both formal and informal mentors, however, examines their influence through students' high school graduation or college application. The extent of community mentors' influence on college graduation is largely under-studied. Examining the relationship between home community mentors and students' college graduation is important because these relationships already exhibit many characteristics that make a mentor relationship effective – trust and time (Gaddis 2012). Mentoring relationships that start in college have the burden of developing trust, but mentoring relationships that students bring with them from their home communities can be effective in producing capital immediately. Considering the importance of social capital for college graduation, it is important to understand if and what type of role pre-college mentors play for minority students throughout the entire course of college.

Gender

It is well established that African American and Latino women apply (Desmond and Turney 2009; Feliciano 2012), attend (Bernal 2001), adjust to and graduate from college (Melendez and Melendez 2010; Baker and Robnett 2012) at higher rates than their male counterparts. This trend is reversed, however, for Asians. Feliciano's (2012) research helps to

clarify the possible underlying factors that influence these disparities, at least among immigrant adolescents. Her study found that in comparison to girls, boys spent less time on homework, had more negative interpersonal experiences at school and were more focused on their role in the family. Girls, on the other hand, developed closer relationships outside of the family (reducing the negative effects of familialism) and experienced more parental monitoring. Feliciano also found that among immigrant students these gender experiences in childhood and adolescence influenced educational disparities later in life.

However, the disparities between genders are complex and still unclear. In an analysis of gender differences among social networks, Lin (2001) found that women usually have more familial ties within their networks while men have more non-kin ties. While the difference in network constitution may partially explain variations in college graduation rates, it is still unclear how the actual resources attained from similar networks (i.e., parental networks) vary by gender.

Significance of Study

Much of the research on social influences on the college completion process approaches the topic with an additive formula. In other words, scholars examine the influence that pre-college relationships, including parents, peers, teachers and other formal mentors, have on college entrance and then separately examine the influence of college relationships (college peers, romantic relationships, faculty) on college completion. This research is attempting to bridge pre-college and college social factors by examining the influence of parents and other pre-college relationships throughout the entire college process, particularly on graduation.

Figure 2 shows the range of pre-college factors identified in the literature and their potential relationship to college factors that affect graduation. For this study, I focused on the subset of relationships between pre-college and college factors represented by the orange lines.

Specifically, I examine how home community relationships affect academic, social, cultural and financial adaptation and indirectly or directly affect graduation. I also examine how parents' encouragement, education and socioeconomic status affect graduation directly.

Research Questions

Building on Rios-Aguilar and Diel-Amen's (2011) social network approach on the education attainment of Latino college students, I address the following research questions:

1. How do graduation rates and capital from home social networks differ for underrepresented minority males and females?
2. In what ways and to what extent does parental social capital impact college graduation for underrepresented minority students?
3. How do community-of-origin mentors influence the likelihood of college graduation for underrepresented minority students?

Hypotheses

1. Hypothesis 1a: Underrepresented minority women will graduate at higher rates than underrepresented minority men.

   Hypothesis 1b: Underrepresented minority men and women will receive different amounts of capital from their home social networks.
2. Hypothesis 2a: Parental capital will be positively associated with college completion for all racial groups.

   Hypotheses 2b: Parental capital will more strongly influence college graduation for underrepresented minority students than for white students.

3. Hypothesis 3a: Resources from pre-college mentors will be positively associated with college completion for all racial groups relative to other factors.

   Hypotheses 3b: Resources from pre-college mentors will more strongly influence college graduation for underrepresented minority students than for white students relative to other factors.

METHODS

Data

This study utilized data from the National Longitudinal Survey of Freshman (NSLF). The NSLF is a 5-year study aimed at studying the differences between white and minority achievement for students attending selective colleges and universities. The sample of institutions followed those in Bowen and Bok's (1998) College and Beyond Survey and is included in Appendix Table A1. Data were collected over 6 waves via face-to-face and phone interviews, beginning during Fall 1999 semester when respondents were entering college and ending in Spring 2004 with a post-graduation interview. In order to have a sufficient minority population in the study, Black, Asian and Latino students were oversampled, producing equal-sized samples of each minority group and White students. Respondents came from 28 institutions across the country and the final sample size for the survey was 3,924 students – 959 Asians, 998 whites, 1,051 blacks and 916 Latinos. The initial survey asked questions regarding students' pre-college neighborhood, family, and educational experiences as well as their attitudes and motivations. Each follow-up survey assessed students' social, psychological and academic experiences at their current campuses.

Measures

Outcome Variable

Graduation is defined as whether or not students completed an undergraduate 4-year degree at any institution within 6 years (graduation could be from any institution, not necessarily the institution where the student began college). This information was taken from Wave 6 of the survey and is coded No=0 Yes=1.

Explanatory Variables

Parental income in this study is self-reported by the student. In Wave 1, students were asked to estimate the annual income of the household in which they spent their senior year of high school. Income is coded Income <$35,000=0 Income ≥ $35,000=1. The cut-off of $35,000 was chosen following the federal guidelines for low-income status for a family of four (US DOE 2015).

Following Desmond and Turley's (2009) work, *parental education* is defined by whether or not either parent attained a 4-year degree, where 0=No parent with a college degree and 1= at least one parent with a college degree.

Parental support measured parental attitudinal orientation towards college, which was assessed during Wave 2. Using principal component analysis, I created a scale for *Parental Support for Academic Performance* which included variables based on questions concerning how important it was to respondents' parents that the student attended college, worked hard in college, got good grades in college, graduated from college, went on to graduate or professional school and studied something practical. Each of the original variables loaded highly onto the first principal component, which was used for the newly created scale variable. Chronbach's alpha was 0.72. A mean factor score was then created for each respondent, where higher values

indicated higher importance for academic performance. I also included two other variables for parental support. *Support for Academic Freedom* is defined as how important it was to respondents' parents that the student studied something of interest. *Sports Support* indicated how important it was to parents that the student played a sport. The two latter variables were measured on a scale from 0 to 10.

Mentoring information was collected from Wave 4 of the NSLF. Informal mentors were identified with the question: "Looking back over your high school years, was there anyone besides your parents or the person who raised you who served as a role model, guide, and source of encouragement and inspiration, in other words, a mentor?" Response to this question is coded No=0 Yes =1. The NSLF did not ask whether this mentoring relationship continued into the college years. *Mentor resources* include what type of support the mentor offered to the student. Questions were first grouped under the following categories: psychological resources, human capital, social resources and financial resources. The mean score from 0 to 10 (total disagreement to total agreement) of the statements included under each category was then calculated. The categories were constructed as follows:

1. Psychological resources
    a. My mentor believed in me
    b. My mentor made me believe in myself
    c. My mentor gave me the confidence to attend college
2. Social resources
    a. My mentor exposed me to new activities
    b. My mentor exposed me to new types of people
3. Human Capital

a. My mentor helped me with my schoolwork

b. My mentor taught me new skills

4. Financial resources

a. My mentor provided me with financial help.

Gender is a dummy variable coded Male=0 Female=1.

Race is categorized as follows: Whites (non-Hispanic), Blacks (non-Hispanic), Latinos (including Latinos from all racial backgrounds) and Asians.

Control Variables

Previous research suggests that the mentor's relationship to the student as well as the mentor's racial and gender similarity to the student are important in understanding the effectiveness of the mentor-mentee relationship (Erickson, McDonald and Elder 2009; Gaddis 2012). This study controls for these mentor-related variables. The *mentor's relationship* consists of three dummy variables categorized as follows: relative mentor, teacher mentor or some other type of mentor. Gender similarity and race similarity includes whether the mentor is the same gender or race as the respondent, respectively. Both variables are coded No=0 Yes=1.

Type of institution is represented with dummy variables for Liberal Arts College, Private Research University and Public Research University.

Studies of immigrant youth indicate that nativity is an important indicator of both college aspirations and college completion. Building on the findings by Vartanian et al. (2007) showing that nativity was highly significant in explaining why Asian American students graduate at higher rates than all other ethnic groups, this study controls for the nativity of students included in the sample. Nativity is described with the *immigrant* variable, representing whether either parent is an immigrant, which is coded No=0 Yes=1.

College aspirations describe students' outlook related to degree completion. This was assessed during Wave 1, before students entered their first year of college, and reflects students' beliefs about the probability of completing college. Questions included how probable students felt it was that they would finish one year of college, finish two years of college, and graduate from college. The mean score from 0 to 10 (not probable to completely probable) of the three questions was used.

In order to address the influence of the student's human capital on college graduation, the student's high school GPA (measured on a 4-point scale) which was collected in Wave 3, is also a control variable in this study.

Analysis

To help understand general patterns in college completion, the outcome variable, descriptive statistics exhibiting variation by race are presented. In addition to graduation information, comparisons are also presented for explanatory variables, student-level predictors, including high school GPA, gender, nativity and college aspirations, as well as parental capital and mentor capital for each racial group. These data provide a snapshot not only of how minority groups differ from Whites along key variables, but how each racial group differs from the others.

In order to test the first hypothesis and assess whether gender moderates graduation and home social capital, I include a means comparison of college completion and parental support for male and female students in each racial group. This separate analysis of minority women and men is imperative because gender differences within racial groups are often recognized, but have not been analyzed as a function of social networks.

Logistic regressions were computed in order to determine the likelihood of college graduation in five models. The first two models provide background on the effect of race and

student-level factors, including gender, GPA, institution type, nativity and students' college aspirations on the likelihood of college graduation. The third model tests the second hypothesis, namely the effect of parental capital variables, which include parental income, parental education, parental academic support, parental support for sports and parental support for academic freedom. The fourth model adds to the previous model variables related to whether students had a high school mentor. The fifth model includes only those who had a high school mentor and examines how mentor resources affect the likelihood of graduation. In order to formally test the group comparison hypotheses, a postestimation test was run using the suest command in Stata.

Students who were missing data on graduation (0.2%) were excluded from the analysis (N=3,913). Of the remaining students in the sample, 227 were missing data on the explanatory variable, *Parental Support*. Upon further examination, these students did not share any particular demographic characteristics (i.e., race, income, gender, parental education) and were found to be missing at random. In order to account for these missing data, I utilized both a single imputation method where each missing value was replaced with the variable mean and listwise deletion. Results were nearly identical in both regression models. In order to preserve unbiased coefficients and overall simplicity of analysis, I chose to utilize listwise deletion.

RESULTS

Descriptive statistics

Tables 1 through 4 show descriptive statistics. Table 1 shows graduation rates and demographic characteristics for the entire sample. Table 2 shows graduation rates for each racial group by type of institution attended. Overall, over 87% of students represented in this sample graduated from college within 6 years. As expected, White and Asian students were most likely

to graduate from college (92% and 90%, respectively), followed by Latinos with an 86% graduation rate and then Blacks, with a 79% graduation rate. Asians and Whites were significantly more likely to attain a bachelor degree than Latinos and Blacks. Latinos also were significantly more like to graduate than Blacks.

(Table 1 about here)

The racial gap, with Whites and Asians on one side and Blacks and Latinos on the other, widens in the examination of student-level variables and parental demographic traits. Whites and Asians exhibited higher high school GPAs, averaging 0.7 points higher than Latinos and 0.22 points higher than Blacks, and these differences were statistically significant. College choice also adversely affected graduation rates for Black and Latino students. When Blacks and Latinos attended public universities, they graduated at significantly lower rates than Blacks and Latinos who attended private institutions, who already graduate behind Whites and Asians. Black students were also most likely to attend public institutions.

(Table 2 about here)

Furthermore, White and Asian students were significantly more likely to have college-educated parents, at 90% and 84% respectively. In stark contrast, only 68% of Blacks and 69% of Latinos had a college-educated parent, indicating that these groups included larger percentages of first-generation college students. This resulted in a type of tiered disadvantage of race, institution type and first-generation status, further exacerbating the educational gaps with Whites and Asians.

Overall, 57% of the students sampled reported having a mentor from their home community. Asian students were statistically less likely than other students to have a community mentor, with only half reporting this type of relationship. Racial similarity between students and

mentors varied greatly by racial group. Fifty-six percent of all White students reported that they had a community of origin mentor who was of the same race, while 37% of Blacks, 17% of Latinos and 16% of Asians reported the same. These numbers represent the percentage of all students in the sample. Examining only the students who reported having a community of origin mentor, 93% of Whites, 61% of Blacks, 30% of Latinos and 32% of mentored Asians reported their mentor to be of the same race. Additionally, the type of mentor students had varied by group. Considering only mentored students, Whites were most likely to have a teacher as a mentor at 54%. Latinos and Asians were not statistically different than Whites, with 48% of mentored Latinos and 50% of mentored Asians reporting teachers as mentors. Blacks, however, were statistically less likely than all other racial groups to have a teacher as a mentor, with only 34% of mentored students reporting this type of relationship. In contrast, Blacks were statistically more likely than all other groups to report some other type of mentor. Forty percent of Blacks reported these types of mentors, compared to approximately 26% of Latinos, Asians and Whites.

Additionally, the type of resources each group received from mentors varied greatly. Blacks and Latinos were more likely to report receiving psychological and emotional resources from their mentors than Whites and Asians. Blacks reported receiving social resources most, followed by Latinos, Asians and lastly Whites, although the difference between groups was small. There was no statistical difference between racial groups for human capital resources. However, Blacks far surpassed all other groups in reporting receiving financial resources from mentors, with a mean of 3.35 on a 10-point scale. Latinos followed with a mean of 1.87, Asians with 1.45 and Whites with a mean score of 1.01.

Gender and racial differences

Table 3 demonstrates gender differences in mean graduation rates for the four racial groups. T-tests indicate that Black females and Latinas graduated at statistically significant higher rates than their male counterparts in this analysis. Eighty-three percent of Black females in the sample graduated compared to 73% of Black males. Although the difference between Latina women and Latino men was smaller than between Black males and females, Latinas out-graduated Latinos, 88% to 83%, respectively. There were no significant gender differences among Whites and Asians. This supports hypothesis 1a, which proposed that Black and Latina women would complete college at higher rates than their male peers.

(Table 3 about here)

This analysis set out not only to determine whether there were significant differences in graduation rates between Black and Latino men and women, but, as stated in hypothesis 1b, to examine whether differences exist between genders in the amount and types of parental support received. Figures presented in Table 4 indicate the differences in mean scores for the three types of parental support. For Black students, two-tail t-tests indicate that there are statistically significant differences between males and females in parental support for sports. Black men reported a mean score of 2.91 on the sport support scale, while Black women reported a mean score of 1.51. Conversely, Black women received more support for academic freedom than Black men, with a mean difference of 0.32 which was statistically significant to the $p<.05$ level. It is also important to note that there is also a gender difference in the variable for parental support for academic performance: Black women report a higher mean than Black males, although this difference falls just under the threshold for statistical significance ($p=.06$).

Like Blacks, Latinos and Latinas showed differences in the amount of parental support each gender group received for academic performance and sports. Latinas had a scale score for parental support for academic performance of -0.02, while Latino men had a scale score of -0.16, and this difference was also under the threshold for statistical significance ($p=.07$). Again, there was a significant difference with support for sports ($p<.001$), with Latino men reporting much more support for sports from their parents than Latinas (2.35 and 1.61, respectively). Hypothesis 1b, which purported that there are gender differences in the amount of parental support underrepresented minority students receive, is supported from these data.

(Table 4 about here)

Analysis

Student-level predictors

Although student-level variables were not hypothesized as predictors of graduation in this study, previous research suggests their importance. Therefore, Models 1 and 2 are included in Table 5 in order to provide a baseline before testing the hypothesized variables. Model 1 tested the direct effects of race on graduation, with Whites as the reference category. While there is no statistically significant difference in graduation rates between Whites and Asians, there is a significant difference between Whites and underrepresented minorities, with Blacks expecting 65% lower odds of graduating than Whites and Latinos having 43% lower odds of graduating than Whites.

In Model 2, I add the variables for gender, GPA, student college aspirations, and the type of institution the student attended. Model 2 shows that the odds of Blacks and Latinos graduating improve slightly compared to Whites once I include these student-level variables, but there are still significant disparities between these racial groups. Blacks had 56% lower odds of graduating

than Whites, and Latinos had 39% lower odds of graduating than Whites. These findings support previous research showing that differences in individuals' college readiness do not explain away racial disparities in college completion.

(Table 5 about here)

Parental capital

Model 3 includes the hypothesized variables for parental capital – parental income, parental education, and parental support of academic performance, sports and academic freedom. This model tests Hypothesis 2a, which predicts that parental capital will be positively associated with college completion for the entire sample. After statistically controlling for the other variables in the model, parental education was associated with 72% higher odds of graduating for students who had one parent with a college degree compared to first-generation college students. The three elements of parental support presented positive coefficients, however they were not statistically significant in the model for the entire sample. Thus, Hypothesis 2a is partially supported by these results in that certain elements of parental capital, namely parental education, affect graduation for all students. Nevertheless, Model 3 also shows that after accounting for differences in student preparation, student choices and parental capital, Blacks and Latinos continue to have statistically significant, lower graduation rates than Whites.

Parental capital and graduation by race

Model 3 was also used to test hypothesis 2b, which predicts that parental capital will more strongly influence college graduation for underrepresented minority students than for White students. Table 6 shows that parental income is a significant predictor of graduation for Latinos, with students with parental income of $35,000 and higher experiencing an 86% increase in the odds of graduation. Parental education is statistically significant in predicting graduation

for underrepresented minorities. For Blacks, parental education increases the likelihood of graduation by 53%, after controlling for the other variables in the model. For Latinos, parental education is associated with a 98% increase in the odds of graduation. This effect is statistically significant ($p<.001$). White and Asian students exhibit a larger odds ratio than Black students for parental education, however the coefficient is not statistically significant. Although Blacks and Latinos exhibit large and significant odds ratios for this variable, post-estimation results do not show evidence of a statistically significant difference between the effect of parental education or income on graduation for underrepresented minorities and Whites.

(Table 6 about here)

However, t-tests do show evidence of statistical difference between Blacks and Whites for the effect of parental support of academic performance ($p<.001$). For Blacks, this type of support is associated with a 22% increase in the odds of graduation. There is no effect for Latinos. On the other hand, support for academic performance is negatively and significantly associated with graduation for Whites. Each single unit increase in support of academic performance for Whites is associated with a 26% decrease in the odds of graduating, after controlling for the other variables in the model. Therefore, hypothesis 2b, which proposed that parental capital is a more influential predictor of graduation for underrepresented minorities than for Whites is partially supported. Parental support of academic performance is the only element of parental capital that is more influential for a minority group (Blacks) than for Whites.

Home network capital

Models 4 and 5 add the variables for home community mentors and mentor resources. These models addressed hypothesis 3a, which predicted that home community mentors would be a significant predictor of graduation for the entire sample and hypothesis 3b, which stated that

mentors' resources would more strongly influence graduation for Blacks and Latinos than for Whites. Neither having a mentor during high school, mentor demographics nor resources obtained from mentors significantly predicted graduation in this sample. Therefore, these hypotheses were not supported by these analyses.

DISCUSSION

Home social networks are important in the college process. Previous research has established that parents and informal mentors are particularly important to minority students during the "Getting In" stage of college. This study examined whether and how these networks help Latino and Black students graduate, considering that these underrepresented populations have lower graduation rates than White and Asians students. This study also addressed how social networks produce different amounts and forms of capital for Latino and Black men and women and how that capital affects graduation for each gender. Using a logistic regression analysis, I found that various forms of parental capital, income, education and support, are more vital to college graduation for Latinos and Blacks than for Whites and Asians. Also, Latina and Black women graduate at higher rates than their male counterparts and they reap larger amounts of the type of parental support that is most relevant to graduation.

In line with previous research, parental education is the strongest form of parental capital in terms of predicting graduation for Blacks and Latinos (Vartanian et al. 2007; Desmond and Turley 2006). However, it was not a significant predictor for Whites and Asians. This appears to be counterintuitive, especially considering that previous literature has found parental education significant for all types of students (Vartanian et al. 2007). Although there were strong coefficients for parental education for Whites and Asians, they did not meet the accepted threshold for statistical significance. The characteristics of this sample of students may partially

explain this finding, in that almost the entire sample of Whites and Asians (90% and 84% respectively) were non-first generation students. Since parental education was almost a given for these two groups, high school GPA became the most significant factor for predicting graduation in these cases.

For Latinos in this sample, parental income was a significant predictor of graduation. This finding supports previous research, which suggests that parental income predicts student aspirations for college as well as their eventual educational attainment (Vartanian 2007). It is unclear, however, why this finding only pertained to Latinos. Further research should address how the relationship between income and education differs by race and how that relationship effects college graduation for each racial group.

Parental support was positively associated with graduation, but only for Black students. One explanation for this finding is that Black students often encounter the most obstacles to social integration and cultural adaptation. In this sense, parental support may be more critical in supporting students' graduation. An interesting and encouraging element of this finding is that Black students experience a positive influence from all types of their parents' support. They were the only group to experience this. Even parental support for sports was positively associated with graduation for Blacks.

This finding is encouraging for two reasons. First, Black students' positive response to their parents' support is heartening for the racial group that encounters the most barriers in higher education. Second, parental support is significant in graduation for Blacks who attend private research institutions (see Appendix Table A3). This could be a reflection of the complementary effect that parents may have on student graduation when there are fewer institutional obstacles in education, such as sufficient student spending and a robust sense of

community. Future research on graduation should include an analysis of the relationship between parental support and campus climate.

Mentors were not significant for graduation among students in this sample. This does not mean that they are not important to the college completion process, but may reflect a limitation in this study. First, students at selective institutions may represent a degree of self-selection. In this circumstance, students in this sample may not represent those who would benefit from a mentoring relationship, like students who may attend 2-year institutions. Future research should analyze the role of home community mentors at community colleges and other types of less selective universities, especially considering that most minority students attend those institutions. Second, mentors' influence may be most significant to the "Getting In" stage of college, as previous research has stated (Erickson, McDonald and Elder 2009). Lastly, the NLSF did not assess whether the home community mentoring relationship continued into college or the number of contacts that students had with these mentors during college. Further, NLSF mentoring questions included missing data whereas only 80% of the sample answered questions about whether they had a home community mentor. This may reflect measurement error so that the effects of mentoring beyond the "Getting In" stage could not be determined. Future research should include a more comprehensive measure of pre-college mentoring that better assesses the quality of the mentoring relationship in addition to the type of relationship.

Lastly, gender differences in graduation rates were present among Blacks and Latinos. Both groups of women garnered higher amounts of the more effective form of parental support – academic support. This is an important finding because much of the research on gender differences has examined differences in the amount of familial vs. non-familial ties. This study found that within the same social network, Black women and Latinas actually receive more

academically-oriented support than males (gender differences significant at p=.06). This partially echoes Feliciano's (2012) findings that immigrant boys were more focused on non-academic responsibilities while adolescent immigrant girls received more academic attention from their families. Again, this information is useful to higher education practitioners because, while some cultural traditions may stand in minority communities, such as Latino adolescents expected to assist in the economy of the home, equipping parents with information that links their support to their children's academic futures could reduce the gender gap and improve graduation rates in general in these communities.

There were some limitations in the data that would not permit an ideal test of the hypotheses. Primarily, as mentioned before, the data represented students at 28 selective institutions, which does not allow generalizations to minority college students at large, especially considering that most minority students receive their higher education outside of the institutions in this sample. Future research should include a more diverse sample of institutions, including 2-year and public teaching institutions. Second, this dataset was collected between 1998 and 2003. Over the past 16 years, many states have eliminated or altered affirmative action in their admissions policies. Minority enrollment has decreased significantly at some of the institutions included in this dataset. Future research should assess if parental support plays a different role in graduation for Blacks and Latinos, considering that campus climate has changed since the first sample was taken.

CONCLUSION

This study examined the relationship between college graduation, home social networks and gender among college students at selective institutions. This study found that parental education is the most influential type of capital for Latinos and Blacks. Parental support is also

significant for graduation among Black students, but only in a complementary capacity in relation to parental education. Also, Latinas and Black women graduate at higher rates than their male counterparts due, in part, to attaining more parental support for academic performance. Most important, this study adds to the cultural integrity literature, finding that underrepresented students indeed have accessible and useful capital in their social networks, which is used to overcome unique obstacles they face at predominantly white institutions of higher education.

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Table 1. Descriptive Statistics

	All (n=3913) Mean (SD)	Blacks (n=1051) Mean(SD)	Latinos (n=915) Mean(SD)	Asians (n=951) Mean(SD)	Whites (n=996) Mean(SD)
Outcome					
Graduated ≤ 6 years	.87(.34)	.79(.40)$^{a***\ b***\ c***}$	.86(.35)$^{a***\ b*\ d***}$	.90(.30) $^{c*\ d***}$	.92(.28) $^{c***\ d***}$
Student Predictors					
GPA	3.70(.34)	3.56(.39)$^{a***\ b***\ c***}$	3.71(.34)$^{a***\ b***}$	3.78(.30) $^{c***\ d***}$	3.78(.28) $^{c***\ d***}$
Immigrant parent	.5(.50)	.28(.45) $^{a***\ b***\ c***}$	.69(.46) $^{a***\ b***\ d***}$	.92(.27) $^{a***\ c***\ d***}$	.15(.36) $^{b***\ c***\ d***}$
Female	.58(.49)	.65(.47)$^{a***\ b***c**}$	.58(.49)^{a*d**}	.57(.50)^{d***}	.52(.50)^{c*d***}
% at Public Universities	.32(.47)	.35(.48)^{a**c*}	.31(.46)^{d*}	*.32(.47)*	.30(.46)^{d**}
% at Private Universities	.58(.49)	.56(.50) ^{a*}	.60(.49)	*.58(.49)*	.60(.49) ^{d*}
% at Liberal Arts Colleges	.10(.29)	.09(.28)	.09(.29)	*.10(.30)*	*.10(.30)*
College Aspirations	9.89(1.54)	9.87(.50)	9.85(1.08)	*9.89(.42)*	9.94 (2.80)
Parental Capital					
Parental education (at least 1 parent graduated college)	.78(.47)	.68(.47) $^{a***\ b***}$	.69(.46) $^{a***\ b***}$	.84(.37) $^{a***\ c***\ d***}$	.90(.29) $^{b***\ c***\ d***}$
Parental Income (% over $75k)	.54(.46)	0.41(.49) $^{a***\ b***\ c*}$	0.46(.50) $^{a***\ b***\ d*}$	0.59(.49) $^{a***\ c***\ d***}$	0.69(.46) $^{b***\ c***\ d***}$
Parental Support – Academic Performance (Scale)	0 (1.00)	0.13(1.02) $^{a***\ b***\ c***}$	-0.08(1.04) $^{a***\ b***\ d***}$	0.24(0.91) $^{a***\ c***\ d***}$	-0.30(0.94) $^{b***\ c***\ d***}$
Parental Support – Sports (1-10)	2.00(2.57)	1.99(2.78)	1.92(2.50)	2.01(2.35)	2.11(2.59)
Parental Support – Academic Freedom (1-10)	7.94(2.11)	8.03(2.29) ^{b***}	8.11(2.05) ^{b***}	7.42(2.21) $^{a***\ c***\ d***}$	8.20(1.76) ^{b***}

Table 1 (continued). Descriptive Statistics

	All (n=3913) Mean (SD)	Blacks (n=1051) Mean(SD)	Latinos (n=915) Mean(SD)	Asians (n=951) Mean(SD)	Whites (n=996) Mean(SD)
Home Network Capital					
Home community mentor	.57(.50)	.62(.49) ^{b***}	.58(.49) ^{b***}	.50(.50) $^{a*** c*** d***}$	.60(.49) ^{b***}
Mentor same race as Student	.32(.47)	.37(.48) $^{a*** b*** c***}$	.17(.38) ^{a***d***}	.16(.37) ^{a***d***}	.56(.50) $^{b*** c*** d***}$
Mentor same gender as Student	.37(0.48)	.43(.50) $^{a* b*** c**}$	.37(.48) $^{b* d**}$	.31(.46) $^{a* c* d***}$	.37(.48) $^{b* d*}$
Relative Mentor (%)	.23(.42)	.26(.44) ^{a*}	.25(.44) ^{a*}	.24(.43)	.19(.40) $^{c* d*}$
Teacher Mentor (%)	.46(.50)	.34(.48) $^{a*** b*** c***}$	.48(.50) ^{d***}	.50(.50) ^{d***}	.54(.50) ^{d***}
Some Other Type of Mentor	.30(.46)	.40(.49) $^{a*** b*** c***}$	.26(.44) ^{d***}	.26(.44) ^{d***}	.27(.44) ^{d***}
Mentor Psychological Resources	8.63(1.40)	8.87(1.32) $^{a*** b***}$	8.77(1.36) $^{a*** b**}$	8.51(1.40) $^{c** d***}$	8.34(1.47) $^{c*** d***}$
Mentor Social Resources	6.61(2.42)	6.82(2.58) $^{a** b*}$	6.77(2.32) ^{a*}	6.49(2.33) ^{d*}	6.36(2.39) ^{c*d**}
Mentor Human Capital Resources	5.88(2.46)	5.94(2.59)	5.94(2.49)	5.90(2.37)	5.72(2.38)
Mentor Financial Resources	1.95(3.20)	3.35(3.85) $^{a*** b*** c***}$	1.87(3.11) $^{a*** b* d***}$	1.45(2.69) $^{a* c* d***}$	1.01(2.34) $^{b* c*** d***}$

***p≤.001
**p≤.01
*p≤.05
a=statistical differences with whites
b=statistical differences with Asians
c=statistical differences with Hispanics
d=statistical differences with blacks

Table 2. Mean Graduation Rate for Racial Groups by Type of Institution Attended

	All N=3,913	Black N=1,051	Latinos N=915	Asians N=951	Whites N=996
Liberal Arts	87.43	85.87	85.06	86.46	91.92
Private Research	89.16	82.94 [a*** b*** c***]	89.60 [d***]	91.67 [d***]	92.52 [d***]
Public Research	81.45[e***]	72.12[a***b***c*e*** f**]	79.29[a***b*d*e***]	87.13[c*d*** e*]	89.49[d***]
Total	86.54	79.35[a***b***c***]	86.01[a***b*d***]	89.70[c*d***]	91.57[c***d***]

***p≤.001
**p≤.01
*p≤.05
a=statistical differences with whites at same type of institution
b=statistical differences with Asians at same type of institution
c=statistical differences with Hispanics at same type of institution
d=statistical differences with Blacks at same type of institution
e=statistical differences with same race students attending private institutions
f=statistical differences with same race students attending liberal arts colleges

Table 3. Mean Graduation Rates by Gender and Race

	Blacks N=1051	Latinos N=915	Asians N=951	Whites N=996
Males	72.8%	82.8%	90.1%	90.7%
Females	82.8%***	88.3%**	89.4%	92.3%

***Statistically significant difference from male counterpart at p≤.001
**Statistically significant difference from male counterpart at p≤.01
*Statistically significant difference from male counterpart at p≤.05

Table 4. Means for Parental Support Variables for Black and Latino Men and Women

	Blacks N= 1009		Latinos N=861	
	Females	Males	Females	Males
Parental Support - Academic Performance (scaled)	0.17[ɪ]	0.05	-0.02[ɪ]	-0.16
Parental Support – Sports	1.51[***]	2.91	1.61[***]	2.35
Parental Support – Academic Freedom	8.14[*]	7.82	8.18	8.01

***Statistically significant difference from male counterpart at p≤.001
**Statistically significant difference from male counterpart at p≤.01
*Statistically significant difference from male counterpart at p≤.05
[ɪ] Statistically significant difference from male counterpart at p≤.10

Table 5. Logistic Regression for the Likelihood of Completing College (Odds Ratios)

	Model 1 N=3913	Model 2 N=3913	Model 3 N=3696	Model 4 N=3038	Model 5 N=1731
Pseudo R2	0.0241	0.0668	0.0750	0.0644	0.0737
Variable					
Student predictors					
Black	0.35***	0.44***	0.49***	0.56**	0.59 I
Latino	0.57***	0.61***	0.69*	0.71	0.75
Asian	0.80	0.78	0.78	0.80	0.92
Female		1.36**	1.39**	1.20	1.36 I
GPA		2.77***	2.72***	2.52***	2.37***
Private Universities		1.82***	1.75***	1.84***	1.75**
Liberal Arts College		1.62**	1.50*	1.66*	1.91*
College Aspirations		1.34***	1.29**	1.14	1.12
Immigrant Parent		1.01	1.04	1.07	1.10
Parental Capital					
Parental Income			1.20	1.21	0.94
Parental education			1.72***	1.81***	1.90***
Parental Support – Academic Performance			1.09	1.07	1.11
Parental Support – Sports			1.01	0.98	0.98
Parental Support – Academic Freedom			1.01	1.04	1.01
Home Network Capital					
High School Mentor				0.91	-
Teacher Mentor					0.91
Relative Mentor					1.08
Mentor Same Race					0.98
Mentor Same Gender					1.06
Mentor Social Resources					0.93 I
Mentor Financial Resources					0.96
Mentor Psychological/Emotional Resources					1.10
Mentor Human Capital Resources					1.03

Notes: Reference groups in this analysis include Whites, Public Universities, males, non-immigrant parents and other mentors

***p≤.001

**p≤.01

*p≤.05

I p≤.10

Table 6. Logistic Regression for the Likelihood of College Graduation by Race (Odd Ratios)

	Blacks N=1003	Latinos N=858	Asians N=908	Whites N=927
Pseudo R2	0.0906	.0854	.0426	0.0584
Female	1.89***	1.44 ǂ	0.96	1.24
GPA	2.87***	1.79*	3.00***	3.98***
Private Research University	2.03***	2.01**	1.45	1.34
Liberal Arts College	2.31*	1.52	1.07	1.12
College Aspirations	1.29 ǂ	1.48*	0.77	1.62*
Immigrant Parent	0.89	1.27	0.87	0.98
Parental Income	1.07	1.86**	1.03	1.97
Parental Education	1.53*	1.98**	1.56	1.60
Parental Support – Academic Performance	1.22*	1.00	1.15	0.74*
Parental Support – Sports	1.07*	0.93 ǂ	1.07	0.99
Parental Support – Academic Freedom	1.05	0.97	0.91 ǂ	1.09

Notes: Reference groups in this analysis include Public Universities, males and non-immigrant parents

***p≤.001

**p≤.01

*p≤.05

ǂ p≤.10

APPENDIX

Table A1. NLSF Sample of Institutions

Barnard College	Smith College
Bryn Mawr College	Stanford University
Columbia University	Swarthmore College
Denison University	Tufts University
Duke University	Tulane University
Emory University	University of Michigan at Ann Arbor
Hamilton College	University of North Carolina at Chapel Hill
Kenyon College	University of Pennsylvania
Oberlin College	Vanderbilt University
Miami University (Ohio)	Washington University
Northwestern University	Wellesley College
Pennsylvania State University	Wesleyan University
Princeton University	Williams College
Rice University	Yale University

Table A2. Odds Ratios of the Likelihood of Graduation by Parental Education Attainment and Race

	First-Generation Students				Traditional Students			
	Blacks	Latinos	Asians	Whites	Blacks	Latinos	Asians	Whites
	N=324	N=269	N=151	N=81	N=679	N=589	N=757	N=838
Pseudo R^2	0.1056	0.0629	0.1349	0.2253	0.0812	0.0551	0.0307	0.0477
Variable								
Female	2.31**	1.64	0.36^{I}	1.75	1.69*	1.25	1.19	1.23
GPA	3.05***	1.47	6.21*	0.28	2.79***	2.05*	2.47**	4.92***
Private Research Universities	1.76*	1.87^{I}	2.20	2.07	2.21**	2.15**	1.32	1.45
Liberal Arts Colleges	4.15*	2.57	3.68	-	1.60	1.08	0.77	1.01
College Aspirations	1.47^{I}	1.89*	0.83	9.73^{I}	1.25	1.28	0.74	1.35
Immigrant Parent	1.25	1.11	0.28	0.93	0.94	1.22	1.03	0.94
Parental Support – Academic Performance	1.26^{I}	0.92	1.30	0.39^{I}	1.20^{I}	1.13	1.15	0.82
Parental Support – Sports	1.00	0.99	1.00	1.53	1.11*	0.90*	1.08	0.95
Parental Support – Academic Freedom	0.97	0.98	0.81	0.99	1.10*	0.96	0.95	1.07

***p≤.001
**p≤.01
*p≤.05
^{I}p≤.10

Table A3. Odds Ratios of the Likelihood of Graduation for Blacks by Institution Type

	Private	Public	Liberal Arts
	N=560	N=356	N=87
Pseudo R^2	0.0966	0.0632	0.1324
Variable			
Female	1.63*	1.82*	6.10**
GPA	3.60***	2.35**	1.67
Private Research Universities	-		-
Liberal Arts Colleges	-	-	-
College Aspirations	1.20	1.91*	0.45
Parental Education	1.75*	1.41	0.63
Parental Support – Academic Performance	1.32*	1.12	1.32
Parental Support – Sports	1.06	1.06	1.10
Parental Support – Academic Freedom	1.03	1.06	1.03

***p≤.001
**p≤.01
*p≤.05
Ip≤.10

Figure 1 – Factors Affecting College Success for First-Generation, Low Income Students (Engle, Bermeo and O'Brien 2006)

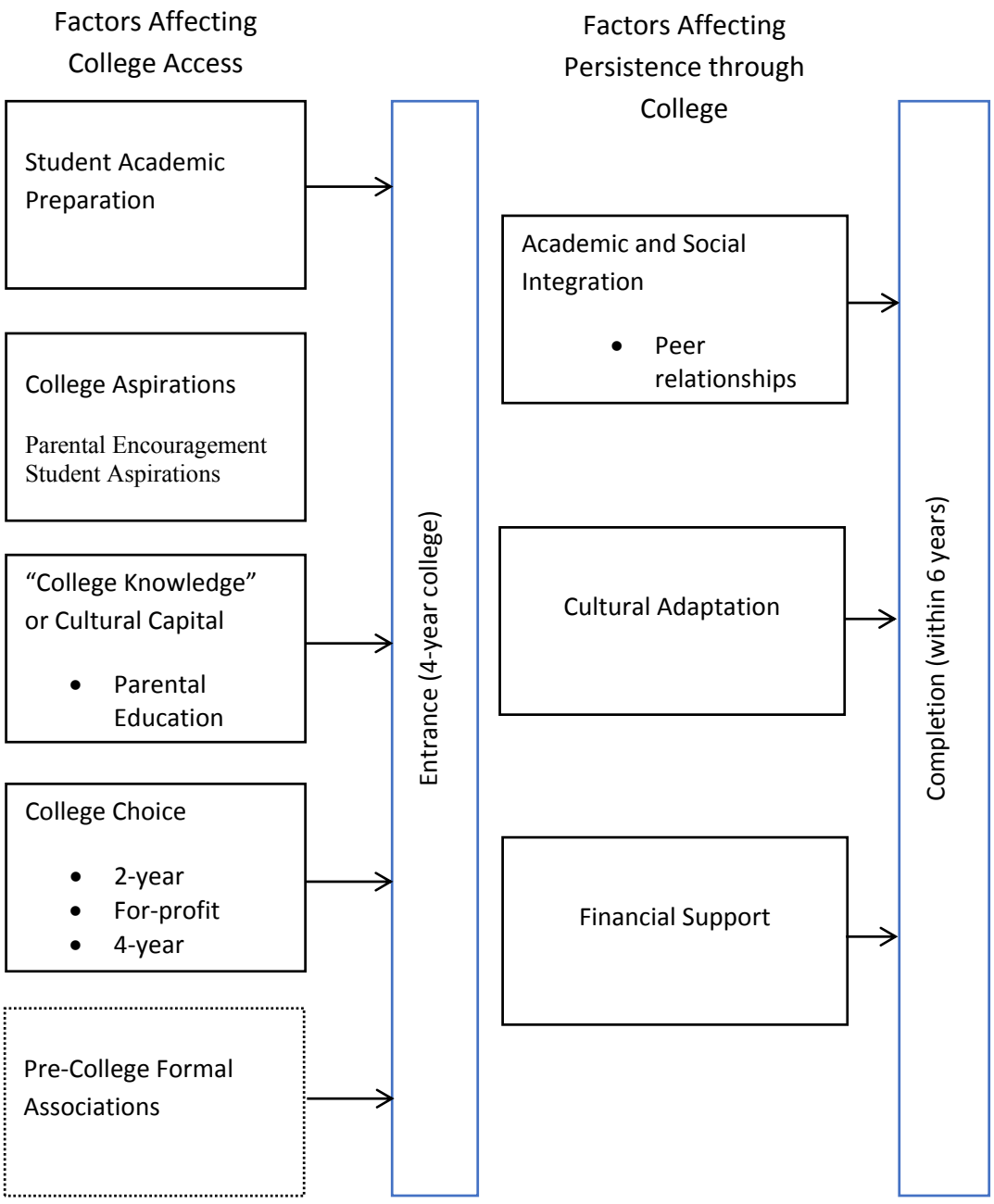

Figure 2 – Analytical Model