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Barriers for Foreign-Born Students in Elite Post-Secondary Education in the United States

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Abstract

Foreign-born students complete college at a lower rate when compared to native-born students. It is essential to examine both the known and latent barriers that prevent foreign-born students from successfully completing the first four years of college. The purpose of this study is to assess the applicability of Bourdieuan notions of capital in explaining the discrepancy in educational attainment between foreign-born and native born students. The data is from the 1999 National Longitudinal Survey of Freshmen (n=3176), a survey designed to test various theoretical explanations for minority underachievement in higher education. Stepwise regressions were used to determine the individual impact of nativity, race, cultural capital, and economic capital to graduating within four years. In the unadjusted model, nativity was moderately associated with four-year graduation ($\beta=0.760$; $p=0.053$). However in the fully adjusted model, I found that race was more important than nativity status when predicting the odds of graduating, with African American students having a significantly lower odds of graduating in four years ($\beta=0.576$; $p=0.000$), than white students. Gender and economic capital were also significantly associated with 4-year graduation rates, with men less likely to graduate than women ($\beta=0.733$; $p=0.000$). And individuals in the highest income category (over \$75,000/year) were more likely to graduate in four years than those in the making less than 19,999 per year ($\beta=1.645$; $p=0.028$). Parental disciplinary style was also a significant ($p=0.000$) correlate with four year graduation rates. Future studies should repeat these inquiries in a dataset that includes less selective institutions.

Introduction

Children from immigrant families currently constitute one-fifth of the population of children in the United States (Hernandez & Charney, 1998), and the population is rising (Capps et al., 2005). While immigrants comprise 11 percent of the total U.S. population, children of immigrants make up 22 percent of the 23.4 million children under 6 in the United States (Capps et al., 2005). These children will enroll in colleges at a significant disadvantage compared to their peers considering how the majority of immigrant families have low income, low educational levels, and limited English proficiency (Capp et al., 2005; Pearce & Lin, 2007). All three factors are associated with low performance in school. Capp et al (2005) found that 64 percent of foreign-born children of immigrants live in low-income families. The disadvantages of these immigrant students will likely follow them during their educational career and limit their post-secondary opportunities.

In a study to examine the efficacy of federal, state, and school-based programs in increasing educational attainment among the poor, Deming and Dynarski (2009) note that obtaining a college degree is key to a middle class lifestyle. As such, policy makers have focused on increasing college enrollment as a tool for mitigating poverty (Deming & Dynarski, 2009). Assessing the challenges to providing a sufficient education for all children, Murnane and Steele (2007) state that more and more education is necessary to earn a decent living for all populations. For immigrant families seeking a more secure future in the United States, obtaining higher levels of education serves as a security measure against poverty.

Rates of education in the foreign born population 25 and older, regardless of income, are lower than native-born individuals; 68 percent of foreign born have completed high school compared to 89 percent of native born (U.S. Census Bureau, Educational Attainment in the

United States, 2009). This directly extends to the difference in college completion rates for both foreign-born and native born populations. According to the 2010 Current Population Survey measuring the educational attainment of the United States population 25 years and over, 18 percent of the foreign-born population obtained a bachelor's level education, compared to the 19.6 percent of the native-born population. Although the rates of education between nativity groups are comparatively similar, Day & Bauman (2000) caution against relying on rates of educational attainment that are "close enough". Despite similar increases in educational attainment in foreign- and native-born populations, "the overall education levels of the foreign born are much lower than those of the native population. The net effect of immigration, therefore, is uncertain" (Day & Bauman, 2000, p.12).

Building on past research, this paper aims to explore the differences in post-secondary educational attainment between foreign-born and native born students. Differences in educational attainment between race and class have been well studied and have been the foundation of many policies to mitigate these differences (Sewell, 1971; LaVeist & McDonald, 2002). However, differences in educational attainment have not been thoroughly studied between nativity groups (Chiswick & DebBurman, 2004). Henceforth, this paper will examine the factors that may contribute to the differentials in college completion rates among foreign-born and native born individuals.

Literature Review

Because immigrants from some countries are disproportionately represented among those with postsecondary educational attainment (Baum & Flores, 2011), designing policies that can help the educational attainment of immigrants is imperative. With the intention to inform policy makers on the barriers of education for immigrant students, Baum and Flores (2011) find that the

strongest indicator of post-secondary success is the educational attainment of the parents, with increasing rates for second- and third-generation immigrants. The increasing rates for the subsequent generations (second and third) are likely due to the higher educational attainment in the preceding generations. So, in order to enhance opportunities for immigrant families for several generations, it is important the first generation of immigrants obtain a higher level of educational attainment. However, ensuring that foreign-born students have the opportunity to prepare themselves academically to succeed in college is challenging. Policies for removing financial barriers (Baum & Flores, 2011) and improving cultural literacy (Kiddie, 2011) are vital for improving the opportunities for immigrant high-school students to enroll in post-secondary education.

With attention to the importance of education in determining socioeconomic status of immigrants, this paper seeks to examine the causes of educational outcome differences between native born and foreign born individuals. Identifying the possible causes of unequal educational attainment between native and non-native individuals may help policy makers to enact effective policies to reduce the gap of educational attainment of native- and foreign-born individual. This can be a step toward alleviating social inequality caused by differences in educational attainment.

This study will use Bourdieuan capital as a theoretical background because of its suitability to examine educational attainment as an indirect outcome of parenting and capital transference. Bourdieu's (1986) notion of capital has served as one explanation for gaps in educational attainment by partially attributing it to how an individual presents their own status and social standing to the world. The presentation allows an individual to distance themselves from perceived lower classes through an expression of tastes. The mechanism that shapes one's preferences and tastes, as introduced by Bourdieu, is comprised of the exchange and interplay of

three forms of capital: cultural, social, and economic. Cultural capital is comprised of three intangible components that promote upward mobility such as academic credentials, the socialization of culture, or the ability to comprehend works of art. Social capital, as defined by Bourdieu, is the value or power an individual possesses by belonging to a particular social group. Economic capital refers to financial assets.

Barriers of foreign-born students to post-secondary attainment

Studies have shown that there are stark differences in educational attainment and student achievement based on race and ethnicity (Baum & Flores, 2011; Pearce & Lin, 2009), language acquisition (Gandara & Rumberger, 2009), financial security (Berliner, 2011), and cultural and social capital acquisition (Bourdieu, 2008; Clegg, 2011; Dumas & Ward, 2009; Suarez-Orozco et al., 2009). Although immigrant students are largely disadvantaged on the language, financial, and cultural front, Pearce and Lin (2009), using cultural and structural explanations of Chinese American achievement, found that Chinese Americans are as successful as their White counterparts when compared to the Black or Hispanic population. Baum and Flores (2011), in their study of Black and Hispanic immigrant student success, found that Black and Hispanic immigrant students are largely suffering in educational achievement compared to their White and Asian counterparts due to differing SES. Based on these findings, it appears that low student achievement and subsequent low post-secondary educational attainment disproportionately affect Black and Hispanic immigrant students.

Language Barriers

Studies suggest that one reason foreign-born students are at a disadvantage may be language barriers. Among all the barriers, language difficulties are universal for most immigrant students (White & Kaufman, 1997). Immigrant students who begin school without English

fluency are tasked with not only learning the academic curriculum but also a new culture and language. Bifuh-Ambe (2009), in a qualitative case study of one main English-language learner, sought to gain insight into the major difficulties of language acquisition by interviewing the subject, an administrator of the English Language Institute, a university professor, and two ESL instructors (26). Bifuh-Ambe (2009) found that English-language students often have difficulty with the receptive and expressive aspects of the English language; written assignments; written and oral comprehension; and the teaching, learning, and assessment models of the classroom (28). While it is true that not all students may experience difficulty with every aspect, students must still simultaneously learn the English language and the required course content.

This method of dual-learning often results in an insufficient understanding of course content since immigrant students are tasked with learning the content with an incomplete understanding of the English language. Gandara and Rumberger (2009), in a study focusing specifically on Mexican immigrant students in California public schools, find that nearly all immigrant students struggle with learning course content in a new language (756). Furthermore, the initial gap in knowledge may result in a lasting disadvantage if gaps in understanding are not remedied quickly enough. As they progress through their educational careers with an incomplete understanding of foundational knowledge, immigrant students may struggle to grasp the more complex material, resulting in poor grades or disenchantment with schooling.

Economic Capital as Barrier

Beyond the language barrier, immigrant students are also at a disadvantage as a result of inhabiting a lower socio-economic status (SES) than their White counterparts. The U.S. Census Bureau, with data from 2010, reported that the poverty rate for the foreign-born population is higher (19 percent) than the native born population (15 percent) (“The Foreign-Born Population

in the United States: 2010”). About 31 percent of immigrant children were living below the poverty line, while 21 percent of native born children were living below the poverty line (Census 2012). Students from lower SES often come to school hungry, go without medical care, are inadequately dressed for the weather, or are from unstable neighborhoods (or families) (Berliner, 2011). These attributes hinder students’ ability to learn and focus in the classroom. Berliner (2011), in his argument that poverty reform is the best school reform, effectively linked low school performance with being in or near poverty. It follows that immigrant children who grow up at or near the poverty line will have further diminished opportunities for post-secondary educational attainment.

To alleviate some of the financial pressure of college students, governmental assistance, such as Pell grants, provide aid to families with incomes below \$40,000 (Deming & Dynarski, 2009). Deming and Dynarski (2009), in an evaluation of existing efforts to reduce financial barriers for all college students, note that low-income families are less likely to fill out the application materials because parents lack experience in the process of college enrollment, the students are less likely to have guidance counselors who will guide them through the process, families are less likely to have Internet at home, and families frequently speak English as a second language (17). Ultimately, Deming and Dynarski (2009) find that Pell grants are not properly targeted toward low-income immigrant families due to the overall understanding required to complete the substantial paperwork.

Cultural Capital as Barrier

In the educational sphere, Bourdieu (2008) argued that cultural capital can be seen as competence rather than capital since cultural capital is rather invisible. Cultural capital is defined as the knowledge, skills, and advantages a person possesses which impart them with a higher

status in society (Bourdieu, 2008, p. 47). Cultural capital exists in three forms: the objectified state, physical objects that represent a certain societal standing; the institutionalized state, recognition of higher societal standing by organizations and institutions; and, the embodied state, lifelong accumulation of capital in the mind; (Bourdieu, 2008, p.47).

Physical objects can contribute toward an individual's cultural capital by conveying the idea that the individual understands the cultural significance of the object (Bourdieu, 2008, p.50). The possession and display of these objects alludes to the individual having the necessary education and exposure to works of art, scientific instruments, or particular books. Lastly, the institutionalized form of cultural capital is most commonly recognized in the form of academic credentials or any other form of certification of skills (Bourdieu, 2008, p. 50-51). The recognition of qualification in an official capacity contributes to an individual's competitiveness in the labor market, thus allowing the transfer of cultural capital into economic capital.

While it may seem that students are being rewarded because of their natural academic talents, they are actually being rewarded for their cultural capital (Bourdieu, 2008, p.49). In the instance of foreign-born students, the institutional value of cultural capital may present as a barrier to the transition to post-secondary education. Clegg (2011) agrees and furthers the statement: "While participation is officially constructed in meritocratic and individual terms, the actual costs and benefits of participation are unevenly socially structured" (p. 95). Learners with the "right" kinds of cultural training accrue more cultural capital through enforcement in the classroom. The "right" kinds of cultural capital are "rewarded" with a college degree. In this way, embodied cultural capital becomes an institutionalized cultural capital in that the college degree is a recognized symbol of knowledge and competence by others in the social world. This

academic qualification, or as Bourdieu (2008) calls it, “a certificate of cultural competence”, gives its holder a fixed, recognizable authority with respect to culture (p. 50).

The embodied state entails the transfer of knowledge, skills, and advantages to an individual, typically from the family through socialization, over a longer period of time (Bourdieu, 2008; Kraaycamp & Eijck, 2010). Capital accumulation is problematic for foreign-born students since cultural capital is unequally distributed. In a study using data from the National Education Longitudinal Study (1988-2000), Dumais and Ward (2010) compared the levels of cultural capital possessed by first-generation college students and their non-first generation cohort. They concluded that the middle- and upper-class families are more likely to have cultural capital that conforms to the habitus of schools than do working- and lower-class families (Dumais & Ward, 2010, p. 247). Controlling for economic class, foreign-born students are less likely than their economic peers to acquire “enough” cultural capital for college enrollment. Since cultural capital begets cultural capital, and more importantly, since cultural capital can be exchanged with economic capital, those starting in the educational system with less cultural capital seem to be at a constant disadvantage.

Dumais and Ward (2010) state that students with more cultural capital are more likely to go to college and to secure prestigious occupations, reproducing the social structure of the previous generation. All forms of capital account for the structure and functions of the social world because capital yields profit in terms of distinction. Through the interplay of the three types of cultural capital, the presence of the “right” amount of capital then becomes necessary in higher educational attainment. The “right” kind of capital is established as the dominant kind by the social group with the most symbolic power. A lack of this sort of capital, established by native-speaking English students, is a barrier to post-secondary education. Dumais and Ward

(2010) argue that the students who independently acquire cultural capital may not be as rewarded as their more-privileged peers because their cultural capital appears less natural. This phenomenon is particularly worrisome for those who are first-generation immigrant students as it subjects them to a perpetual state of deficit in terms of capital accumulation.

Several studies have noted the difficulties in the authentic (Sullivan, 2001) and consistent (Vryonides, 2007) operationalization of cultural capital as a result of Bourdieu's imprecise definition. However, in a study of 500 British students in 1998 designed to test the applicability of cultural capital and educational attainment with data specifically designed to measure students' and parents' cultural capital, Sullivan (2001) supported one way to authentically operationalize cultural capital. The transference of cultural capital from parents to their children is strongly supported in the case of students' cultural activities defined as the amount of reading; the limiting of television programs watched; the type of music listened to or instrument played; and the participation in art galleries, theaters, and concert attendance (Sullivan, 2001, p.909). Although variation in individual students' cultural capital exists, this variation is entirely mediated by parental cultural capital (Sullivan, 2001). Additionally, Sullivan (2001) found a lack of school effect in determining this measure of students' cultural capital, further supporting the evidence indicating a consistent transfer of cultural capital from parent to child. Based on Sullivan's findings (2001), this paper examines parental involvement in cultural capital accumulation.

Though Sullivan (2001) has overcome some of the issues in operationalizing cultural capital, the solution pertains to examining the transfer of capital rather than the practices related to cultural capital. With quantitative studies, cultural capital is most often operationalized as "high art participation" (Dumais & Ward, 2010; Sullivan, 2001; DiMaggio, 1982). By visiting

museums and science centers with parents or older siblings, students internalize the values that are sought after by school systems and the broader stratification structure. This occurs when teachers recognize and reward students' participation in Western society's dominant culture and values. These practices of highbrow culture have been found to have an effect on academic achievement (Sullivan, 2001; Dumais, 2002; DiMaggio, 1982)..

Kraaycamp and Eijck, in a study testing the reproduction of cultural capital, found that the 3 types of cultural capital must be operationalized together in order to remain true to Bourdieu's original theory. However, among the three, embodied cultural capital is most transferable. Embodied cultural capital is most frequently operationalized as "practices", such as library visits and high art participation (Dumais & Ward, 2009; Kraaykamp & Eijck, 2010; Sullivan, 2001) and practices such as homework help (White & Kaufman, 1997).

Discipline.

In popular literature, the notion of an authoritarian parenting style is a controversial issue. Particularly associated with Asian mothers ("Tiger mom personality"), a strict parenting style is known for producing high achieving students. Although one scientific study (Hanson & Ginsburg, 1988) supports the association between authoritarian parenting style and academic excellence in children, the scientific literature ultimately finds this parenting style problematic.

Weininger and Lareau (2009) have found significant differences in the type of discipline and structure provided to children based on economic class. They have found that typical activities for upper-middle class children (from families with annual household incomes over \$95,000) entailed substantial direct adult control over most of the child's time while outside of school. This regulation is considered to be one component of the transferal of cultural capital,

since the parents are actively encouraging the children to behave obediently and within parental expectations.

Conceptually, Hanson and Ginsburg (1988) built upon this notion of parental regulation as a component of capital transference by extending it to academic achievement. In a study of the effects of discipline on the academic achievement of 30,000 high-school students, Hanson and Ginsburg (1988) found support for increased academic achievement when parents limited and monitored the time students had outside of school. In particular, Hanson and Ginsburg (1988) focused on the time students spent watching television, and the unstructured time students spent with their friends. In their study, achievement was defined as higher grades and test scores. Ultimately, the authors found that a limitation of the time students spent with friends and spent watching television aligns the values students hold about academic achievement with the values that their parents hold. However, it is of note that the limitations are only on two activities out of many within a teenager's busy schedule. Other studies (Shapiro et al., 2013; Schwartz (2009) have found that this type of transference of cultural capital may actually have the opposite effect, reducing the likelihood of graduating.

Shapiro et al (2013), with a representative sample of 312 students, found that parents were more likely to take disciplinary action when they perceive a child's academic setback as internal, or controllable by the child. This disciplinary style promotes an external motivation for change, which may only produce temporary changes in a student's behavior (Schwartz, 2009). In a literature review exploring the effect of choice and autonomy, Schwartz (2009) argues that "incentives extrinsic to the tasks at hand can undermine intrinsic motivation to learn, resulting in worse performance than would have resulted without extrinsic incentives" (p.391). The regulation and monitoring mentioned by Weininger and Lareau (2009) and by Hanson and

Ginsburg may therefore cause students to only partially invest in their academics, resulting in a fleeting engagement of educational activities (Shapiro et al., 2013; Schwartz, 2009).

Altogether, studies have shown that disciplinary styles are an element of transmission of cultural capital to kids (Weininger & Lareau, 2009; Hanson & Ginsburg, 1988); however, the effect of discipline on academic achievement appears to be a negative one (Schwartz, 2009; Shapiro et al., 2013). Based on the literature, this concept will be used to suggest that punishment and limitations serve as reinforcement of practices (i.e. transmission of cultural capital) that are actually conducive to lower levels academic attainment.

Differences in capital accumulation based on race

The current literature on immigrant education reveals a stark disadvantage for foreign-born students. Previous studies that test the applicability of Bourdieu's notion of capital have provided evidence supporting the concept that less capital is associated with a disadvantage in educational attainment (Dumais & Ward, 2010; Perna & Titus, 2005; Tramonte & Willms, 2010). Overall, without distinction of the country of origin, Asian, Hispanic, and Black students possess less cultural capital than third-generation white students (Kao & Rutherford, 2007; Lew, 2010). Perna and Titus (2005) examined how capital influences the differences in decisions to enter college among minority students. They found that "Blacks and Hispanics not only possess fewer types of capital that promote college enrollment but also attend schools with fewer of the resources that promote college enrollment" (Perna and Titus, 2005, p. 509). Race and ethnicity are also factors in the different rates of cultural capital accumulation. Massey et al. (2003) finds that White and Latino parents tend to be more involved in the transfer of cultural capital to their children, whereas Black and Asian parents are less involved. The current literature examines the differences in educational attainment between foreign-born and native-born students (Lew, 2011;

Baum & Flores, 2011), but there are too few that examines the differences in capital accumulation between foreign-born and native-born students and how it affects educational attainment.

Research Questions

Based on the current literature on foreign-born students and barriers to education, this study is guided by two research questions:

1. Are there differences in educational attainment between native-born and foreign-born students?
2. How well do the notions of capital serve to explain the variability for educational attainment based on nativity status?

Methods

Data

The data is from the National Longitudinal Survey of Freshmen (NLSF), a sample of nearly 4000 students who matriculated into 28 elite institutions as freshmen in the fall of 1999 (see Table 2a). The NLSF seeks to measure academic and social progress of college students in annual intervals while measuring the degree of social integration and intellectual engagement. The survey was designed to gather extensive background information about social, economic, and demographic information of respondents prior to their entering college. In particular, the survey was designed to test various theoretical explanations for minority underachievement in higher education. As such, four racial groups (Asian, Black, Hispanic, White) were equally sampled as part of the broad design that affords maximum usability and freedom for researchers (Massey et al., 2003).

Since the respondents are from some of the nation's most prestigious colleges and universities, the NSLF is hardly representative of all students in the United States. However, the sample serves to illustrate the differences in capital accumulation between foreign-born and native-born status. The minority students included in the NSLF, by definition, have the circumstances and resources that allowed them to matriculate into highly selective colleges, despite any disadvantages faced by many others from the same minority group. In this manner, the NSLF affords a biased view of inequality. Whatever inequalities this study reveals between foreign-born and native-born students in terms of capital accumulation, the contrast is likely far greater between the two groups in a representative sample of all high-school graduates.

Sampling procedures.

Massey et al. (2003) developed the questionnaire after results from a pilot survey administered to the 1998 freshmen class matriculating at the University of Pennsylvania. The sampling was limited to 35 elite institutions chosen from previous work since a collaborative relationship was already established; this is believed to have encouraged a high response rate (Massey et al., 2003). Institutions were stratified by the relative sizes of their black student body. Institutions with relatively large black student populations (1,000+) were assigned a target sample size of 280 respondents (70 in each of four racial/ethnic groups); those with black student populations of 500-1,000 got a target size of 200 interviews (50 in each group); those with 100-500 black students had a target size of 80 respondents (20 in each group); and those with fewer than 100 black students were assigned a quota of 40 interviews (10 in each group) (Massey et al., 2003). This sampling plan from a stratification of institutions was a purposeful oversampling to ensure that Asian, Black and Hispanic groups each comprised around a quarter of the sample.

Massey et al. (2003) then contacted institutional administrators to obtain a list of freshmen to use. From there, students were randomly selected by race and ethnicity. Massey et al. (2003) ultimately approached potential 4,573 respondents across 28 institutions. Of these, 3,924 completed the survey. The final response rate for the survey was 86 percent.

Data collection.

There were five waves of data ranging from years 1999 to 2004. Massey et al. (2003) subcontracted with Temple University's Institute for Survey Research to undertake the interviewing. Wave 1, conducted in 1999, consists of face-to-face interviews that compiled detailed information about the neighborhood, familial, and educational environments students experienced before entering college. Questions asked respondents to recall this information from three benchmarks: age 6, age 13, and the senior year of high school. Waves 2-4 were conducted via telephone interviews in the spring of each subsequent academic year to gather information from the same students about their experiences on college campus. Rather than focusing on background and demographic information of the respondent, Waves 2-4 assessed how the respondent was performing in school, whether the respondent utilized the available resources, and if the respondent was in financial need. Waves 2-4 consisted of the same survey given in the second, third, and fourth year of the respondent's undergraduate education.

The final wave determined whether the respondent graduated from a 4-year institution. This wave also considers those who graduate from a 4-year college in 6 years, taking into consideration those who first attend a community college or those who needed to temporarily withdraw. This design provides a basis for linking pre-college experiences to behaviors and achievement. The data is from 28 participating institutions of higher education.

Sample

After filtering out cases with incomplete questionnaires across all waves, the original sample size of 3924 was reduced to an analytic n of 3176. Since all respondents were traditional undergraduate freshmen, the average age for the sample was 18 years. The sample included four ethnic and racial groups: Asian, Black, Hispanic, and White.

Table 1 describes the sample size with regards to demographic background. Gender is divided relatively equally by itself and on the nativity dichotomy. In all four ethnic categories, the majority (84.2 percent) of respondents were born in the United States. While no single ethnic group constituted more than half of the foreign-born sample, Asian students represented the largest foreign-born group (30.9 percent), followed by Hispanic, Black, and White students. The large majority (73 percent) of students graduated from their institutions within four-years after matriculating.

For this study, the original sample (Asian, Black, Hispanic, and White students) were weighted to be more representative of the United States population in 2000, since the races were equally sampled. In 2000, the percent of the population were 3.1 Asian, 12.3 Black, 12.5 Latino, and 72.1 White (U.S. Census Bureau, 2011). Based on the proportions of racial and ethnic demographics from the “Overview of Race and Hispanic Origin: 2000” and the proportions of the four race and ethnicities in the NLSF, different weights were given to Asians (0.119), Blacks, (0.484), Latinos (0.532), and Whites (2.870). The recalculation of race and ethnicity in the sample resulted in new totals for Asians ($n=98$), Blacks ($n=392$), Latinos ($n=398$), and Whites ($n=2287$).

Variables

This study is designed to test the applicability of cultural and economic capital to explain the differences in graduation rates between foreign-born and native-born students. The

dependent variable is the graduation rate of students. Following the example of previous studies that use Bourdieu's notion of cultural capital as a theoretical framework (Wolniak & Engberg, 2010), cultural capital was operationalized by capturing variables into an index. Economic capital was operationalized with the inclusion of three items that represent the financial stability of the respondent's family during the respondent's senior year. An in-depth discussion of the operationalization of both forms of capital follows.

Graduation rate.

The dependent variable used for this study was rate of graduation at the end of the fourth year after enrollment. Massey's dataset provides information on both 4- and 6-year graduation rates. A 4-year graduation rate was used after taking the mean graduation rate from each of the 28 participating institutions. The graduation rates were taken from the Chronicle of Higher Education's collection of 4- and 6-year graduation rates from 3,800 colleges between 2008 and 2010 (Chronicle of Higher Education, 2011). The majority of the participating institutions had 4-year graduation rates higher than the national average (51 percent) for all types of institutions (Chronicle of Higher Education, 2011; Melguizo, 2008). The mean 4-year graduation rate of all 28 participating institutions was 77 percent (Table 2A). Two of the lowest 4-year graduation rates were Oberlin College and Howard University with 49 percent and 48 percent, respectively (Chronicle of Higher Education, 2011).

There are, however, some studies arguing that the use of a 4-year graduation rate is too limiting. Fuligni and Witkow (2004) found support for using a 6-year graduation rate when determining educational attainment. They note that many immigrant students may attend a 2-year college before transferring to a 4-year college. Additionally, respondents may take a leave of absence due to encountering financial difficulty or pursuing multiple degrees in 5 or 6 years.

Using a 6 year graduation rate also does not penalize students who choose to study abroad, change their majors, or participate in cooperative programs that integrate work and study (Cohen, 2008). In this current study, it makes more sense to use a four year graduation rate since the students from the 28 elite institutions are less likely to experience financial difficulties that deter educational pursuit or to attend a 2-year college beforehand. Students admitted to elite institutions often transfer from other four-year institutions and are disproportionately from the highest SES quintile (Dowd, 2008, p.462). Because the NLSF contain data from only elite institutions, a 4-year cut-off will be used in this study to determine educational attainment. Values ranged from 0-1, where 1 means successfully graduated within four years.

Control Variables.

In order to control for student demographic and socioeconomic characteristics, gender was included as a dichotomous variable where 1 means respondent is male. It is important to control for gender since female students are more likely to complete college (Crissey et al., 2007).

Cultural capital indices.

In order to examine cultural capital, variables from the NLSF were selected that captured the different aspects of upbringing, based on the literature and statistical tests of commonality. Conformitory. Factor analysis was completed for all selected variables to determine the number of extracted components. There were a total of five components; however, only three of the five had values that suggested a meaningful relationship among particular variables. Based on the factor analysis (Table 1A), and the contributions from Sullivan (2001), Vryonides (2007), Dumais and Ward (2010), and Hanson and Ginsburg (1988), three indices were created that measure high arts and science participation; parental investment in the academics of the student;

and parental discipline of the student. All three of the indices measure parental involvement in the formation of cultural capital.

High arts/science participation scale examines high art participation in terms of visits to institutions of science and art. The *high arts/science participation scale* ($\alpha = 0.880$) contains six items from the NLSF that measures the frequency of visits to: science museums at age 6 , art museums at age 6 , science museum at age 13, art museums at age 13, play or concerts at age 13 , and all museums during respondent's last year of high school. All values range from 1-5, with 1 indicating "never" and 5 indicating "very often". Respondents' scores for the six variables were summed and a mean was taken to produce the value for the scale. Responses to this scale also ranged from 1-5, with a score of 1 indicating low participation in high/arts sciences participation and 5 indicating a high level of participation.

Parent academic investment scale contains items that measure parental investment in their child's academics. This scale ($\alpha = 0.836$) contains six items from the NLSF that asked respondents how frequently a parent: checked for completed homework at age 6, helped with homework at age 6, checked for completed homework at age 13, helped with their homework at age 13, checked for completed homework in respondent's last year of high school, and helped respondent with homework in Respondent's last year of high school. All values range from 1-5, with 1 indicating "never" and 5 indicating "very often". Respondents' scores for the six variables were summed and a mean was taken to produce the value for the scale. Responses to this scale ranged from 1-5, with a score of 1 indicating low investment and 5 indicating a high level of investment.

The third index, the *parental discipline scale* is comprised of items that capture the frequency of punishments or restrictions placed on respondents' free time. The punishments and

limitations index ($\alpha = 0.832$) contains items from the NLSF that measured how frequently respondents: were punished for bad grades at age 13, were punished for disobedience at age 13, had limitations on the time spent with friends at age 13, were punished for bad grades in the last year of high school, were punished for disobedience in the last year of high school, had limitations on the time spent with friends in the last year of high school. All values range from 1-5, with 1 indicating “never” and 5 indicating “very often”. Respondents' scores for the six variables were summed and a mean was taken to produce the value for the scale. Responses to this scale ranged from 1-5, with a score of 1 indicating low punishments/limitations and 5 indicating a high level of punishments/limitations.

Economic capital.

To examine the relationship between economic capital and graduation rates, this study conceptualizes both income and financial neediness as components of economic capital. There are four items that capture the financial status of the family in the respondent's last year of high school: household income, home ownership, and importance of availability of financial aid.

Whereas the economic capital in research is fairly straightforward, the variables for economic capital in this study needed to be modified. Household income, in the NLSF, is defined as wages and salaries of all household members, self-employment income, interest, dividends, social security, and public assistance. The federal poverty line (FPL) for a family of three in 1999 was \$15,670 (“HHS”). The majority (69.8 percent) of respondents reported an estimated annual household income of \$50,000 or more. Income is coded as an approximation of the FPL in four categories: poverty line or below (\$0 - \$19,000); middle class or 125% - 375% of the FPL (\$20,000 - \$74,999); 400% of the poverty line (\$75,000 or more); and, those who don't know or refused to answer. This last category was included for two reasons: there were too many

respondents (six percent of respondents) in this category to just exclude altogether, and factor analysis showed that respondents in this group were most similar to the group 400% of the FPL in the way they answered the cultural capital questions.

Since home ownership is also a sign of higher economic capital, home ownership was included as a dummy variable. Lastly, the availability of financial aid was an important consideration when getting the full financial status of the respondent. This item, from the NLSF, asked the respondent how important the availability of financial aid was to the consideration of where to attend college. The values ranged from 1-10, where one means “not at all important” and ten means “extremely important”. The responses were recoded in three categories: not important, important, extremely important. Unlike the other two items, a “higher value” in this item, indicating that financial aid is very important, does not suggest a higher amount of economic capital. Since the availability of aid is considered a very important factor for college options, this suggests that the respondent has lower economic capital.

Analytic Plan

Bivariate (chi-square and t-tests) and multivariate (binary logistic regression) analyses were completed to conduct this study. First, the descriptive statistics were obtained for the analytic sample. To begin to answer my first research question, a chi-square test of independence was performed to determine whether there are differences between foreign-born and native-born respondents in graduation rates within four years. Secondly, stepwise binary logistic regressions were conducted to examine how each of the cultural capital and economic capital indices influence the college completion rates for the study respondents.

Results

Table 1 presents the weighted sample characteristics and differences between respondents who graduated in four years and those who did not. Only eight percent of sample identified as foreign born. The weighted sample is racially diverse: 72 percent of students were white, 12 percent African American, 13 percent Hispanic and three percent Asian. Forty-five percent of the analytic sample was male. For each of the three divisions of cultural capital: high arts and science participation, parental academic investment scale, and parental punishments and limitations, the mean scores on the capital scales for the entire sample were 2.42, 3.02, and 2.10, respectively. Each of the scales had a range from 1-5. The mean score for the high arts and science participation scale for those who graduated and those who did not were 2.46 and 2.32, respectively. The mean score for the parental academic investment scale for those who graduated and those who did not were 3.01 and 3.06, respectively. The mean score for the parental discipline scale for those who graduated and those who did not were 2.03 and 2.29, respectively.

The sample participants reported relatively high household incomes, with 60 percent of households having incomes of \$75,000 per year or higher, representing approximately 400 percent of the federal poverty level. Just over one-third of the weighted analytic sample had incomes between 125 and 399 percent of the federal poverty level, between \$20,000 and \$74, 999 per year. Only 3.5 percent of the sample had incomes below \$19,999 per year. Almost all participants lived in families where their parents owned their home (91 percent). Of the weighted sample, a little under a quarter (21.5 percent) responded that the availability of financial aid was an extremely important factor when considering where to attend university. The majority of students (54.9 percent) responded that the availability of financial aid was only moderately important to college considerations. Lastly, a little under a quarter of students (23.6 percent) who noted that the availability of financial aid was not at all important when considering where to attend university.

Table 1 also illustrates the demographic, cultural and economic capital differences between those who graduated in four years and those who did not. Only one-third of foreign born study participants graduated in four years; however, the effect of nativity on four year graduation was marginally significant ($p=0.058$). Race was significantly associated with four year graduation ($p = 0.000$). Seventy-four percent of Asians graduated compared to only 26 percent who did not. Similarly, 76 percent of white students completed school in four years. Approximately two-thirds of Hispanic students graduated with only one-third reporting non-completion. Only 58 percent of black students graduated in four years compared to 42 percent who did not. Gender, income, home ownership, and financial aid neediness were all significantly associated with four year graduation rates. Seventy-seven percent of high income students graduated in four years compared to only 64 percent of students in the lowest income category ($p = 0.000$). Similarly, almost three quarters of students whose families owned their own home successfully completed college in four years ($p = 0.000$).

Of the 684 students in the sample who reported that the availability of financial aid was extremely important, 67 percent graduated within four years while 3 percent did not ($p = 0.000$). Of the 1745 students in the sample who reported that the availability of financial aid was moderately important, 74 percent graduated within four years while 26 percent did not ($p = 0.000$). Finally, of the 24 percent of the sample who reported that the availability of financial aid was not at all important, 76 percent graduated within four years while 24 percent did not ($p = 0.000$).

Table 1 *Indicators of respondents' demographic and racial/ethnic background, National Longitudinal Survey of Freshmen, 1999*

Indicator of Background	Sample (N=3176)	4-Year Graduation		p-value
		Yes (N=2319)	No (N=856)	
Foreign-born (1=yes) ^a	246 (7.8)	79 (32.1)	167 (67.9)	0.058
Race^a				
Asian	99 (3.1)	73 (73.7)	26 (26.3)	0.000
Black, non-Hispanic	392 (12.3)	228 (58.2)	164 (41.8)	0.000
Hispanic	399 (12.6)	271 (67.9)	128 (32.1)	0.000
White, non-Hispanic	2288 (72)	1748 (76.4)	540 (23.6)	0.000
Gender (1=male) ^a	1431 (45)	1006 (70.3)	425 (29.7)	0.002
Cultural Capital^b				
High arts/sciences participation scale (1-5)	2.42 (0.804)	2.46 (0.796)	2.32 (0.818)	0.000
Parent academic investment scale (1-5)	3.02 (0.791)	3.01 (0.800)	3.06 (0.775)	0.000
Parental Discipline Scale (1-5)	2.10 (0.751)	2.03 (0.718)	2.29 (0.803)	0.000
Economic Capital				
<u>Household Income^c</u>				
\$0k - \$19,999/yr (0%-99% FPI)	111 (3.5)	72 (64.9)	39 (35.1)	0.000
\$20,000 - \$74,999 (100%- 399% FPI)	1085 (34.2)	717 (66.1)	368 (33.9)	0.000
>\$75,000/yr (>400% FPI)	1896 (59.7)	1473 (77.7)	423 (22.3)	0.000
Don't Know or Refused to Answer	84 (2.6)	58 (69)	26 (31)	0.000
Homeownership (1=yes)	2875 (90.5)	2132 (74.2)	743 (25.8)	0.000
<u>Importance of Financial Aid</u>				
Extremely Important	684 (21.5)	459 (67.1)	225 (32.9)	0.000
Moderately Important	1745 (54.9)	1294 (74.2)	451 (25.8)	0.000
Not-at-all Important	748 (23.6)	546 (75.8)	181 (24.2)	0.000

SOURCE: National Longitudinal Survey of Freshmen (Fall 1999 - Spring 2003). NOTE: N=3,176;

^a Number of students with percentage of the sample in parentheses^b Represented by mean with standard deviations in parentheses^c Income reported first as amount per year, then as percentage of the FPL in parentheses

Table 2 shows the breakdown of foreign students by race. Asian students were more likely to be foreign-born; this effect was significant at the 0.000 level. White students were less likely to be foreign-born; this effect was significant at the 0.000 level. Surprisingly, Hispanic students were also less likely to be foreign-born ($p = 0.000$). Being a Black student had no effect on also being foreign-born ($p\text{-value} = 0.953$).

Table 2 *Racial breakdown of foreign born students*

	Foreign-born		
	Yes (246)	No (3176)	p-value
Asian n (%)	68 (69.4)	30 (30.6)	0.000
Black n (%)	30 (7.7)	361 (92.3)	0.953
Hispanic n (%)	79 (19.8)	319 (80.2)	0.000
White n (%)	106 (4.6)	2181 (95.4)	0.000

SOURCE: National Longitudinal Survey of Freshmen (Fall 1999 - Spring 2003). NOTE: N=3,176

Stepwise Logistic Regression Blocks

Regression results can be found in Table 3. In block 1, the unadjusted effect of nativity status on graduation within 4 years was examined. Compared to native-born students, foreign-born students were almost 25 percent less likely to graduate from college within four years than were native born students ($\beta = 0.760$). This was a marginally significant effect ($p = 0.053$). In the unadjusted model only 0.2 percent of the variance in graduation rates is explained.

In block 2, the effects of race/ethnicity and gender were added to the regression model. With the addition of controls for gender and race, the main effect of nativity was reduced from $\beta = 0.758$ to $\beta = 0.834$, and the effect of nativity is no longer marginally significant ($p = 0.224$). Race is significantly associated with the odds of graduating in four years. Compared to white students, Black students were 60 percent less likely to graduate within four years ($\beta = 0.416$,

$p=0.000$). Hispanic students were also less likely than White students to graduate within four years ($\beta=0.662$). This effect is significant at the $p > 0.001$ level. There was no significant difference between Asian and White students' likelihood of graduating in four years. Male students were 27 percent less likely than females students to graduate within four years ($\beta =0.734, p=0.000$).

In block 3, the effect of high arts participation, parental academic investments, and parental punishments and limitations was included. When controlling for cultural capital, race, and gender, the effect of nativity status on graduation rate remained insignificant. The effects of gender, being a Black student, and being a Hispanic student were somewhat changed. Participation in high arts increase a student's odds of graduating within four years ($\beta=1.147$). This effect is significant at the $p > .01$ level. Parental punishments decreased a student's likelihood of graduating within four years ($\beta =0.690, p >0.000$). Parental investment in their child's academics had no effect on a student's likelihood of graduating within four year. Parental punishments decreased a student's likelihood of graduating within four years ($\beta =0.690, p >0.000$).

In block 4, the fully adjusted model, I controlled for economic capital. The effect of nativity status on graduation rate remained insignificant ($\beta =0.879, p=0.404$). There were minimal changes to the other variables from the previous block to this one with the exception of high arts participation. With the inclusion of the variables above, the effect of high arts participation on graduation rates lost significance. Students from households with annual incomes over \$75,000 per year were significantly more likely to graduate in four years than those who have incomes less than \$19,999 ($\beta=1.645, p=0.028$). Neither homeownership nor perceptions of financial aid need were associated with the odds of graduating in four years. With

the inclusion of each block, the Nagelkerke R-squared value consistently increased from 0.002 in block 1 to 0.075 in block 4, suggesting that almost 8percent of the variance in four-year college graduation rates can be explained by nativity, race, gender, cultural and economic capital.

Table 3 *Stepwise Regression Predicting Odds of Graduating in Four Years by Nativity Status, Race, Cultural Capital Accumulation, and Economic Capital*

Variable	<u>Block 1</u>			<u>Block 2</u>			<u>Block 3</u>			<u>Block 4</u>		
	<i>b</i>	<i>S.E.</i>	β	<i>b</i>	<i>S.E.</i>	β	<i>b</i>	<i>S.E.</i>	β	<i>b</i>	<i>S.E.</i>	β
Nativity (1=foreign-born)	-0.274	0.143	0.760† (0.053)	-0.181	0.149	0.834 (0.224)	-0.201	0.152	0.818 (0.185)	-0.129	0.154	0.879 (0.404)
Race¹												
Asian (1=yes)				-0.097	0.239	0.908 (0.686)	0.059	0.243	1.061 (0.809)	0.081	0.245	1.085 (0.741)
Black (1=yes)				-0.878	0.115	0.416*** (0.000)	-0.680	0.119	0.507*** (0.000)	-0.552	0.126	0.576*** (0.000)
Hispanic/Latino (1=yes)				-0.412	0.121	0.662*** (0.001)	-0.303	0.123	0.739** (0.014)	-0.202	0.127	0.817 (0.112)
Gender (1=male)				-0.310	0.081	0.734*** (0.000)	-0.257	0.084	.744*** (0.001)	-0.310	0.085	.733*** (0.000)
Cultural Capital												
High arts/sciences participation scale (1-5)							0.137	0.055	1.147** (0.012)	0.097	0.056	1.102 (0.079)
Parent academic investment scale (1-5)							-0.025	0.057	0.975 (0.659)	-0.032	0.057	0.969 (0.580)
Parental Discipline Scale (1-5)							-0.372	0.056	0.690*** (0.000)	-0.381	0.057	0.683*** (0.000)
Economic Capital - Income²												
\$20,000 - \$74,999/yr										0.009	0.221	1.009 (0.966)
\$75,000 and greater/yr										0.497	0.227	1.645* (0.028)
Don't know or Refused										-0.004	0.322	0.996 (0.990)

**Economic Capital -
Financial Aid³**

Moderately Important			0.030	0.110	1.030 (0.787)
Not at all Important			-0.069	0.138	0.933 (0.615)
Economic Capital - Homeownership (1=yes)			0.217	0.142	1.242 (0.127)
Nagelkerke R ²	0.006	0.034	0.059	0.075	

SOURCE: National Longitudinal Survey of Freshmen (Fall 1999 - Spring 2003). NOTE: N=3,176; *b*=unstandardized regression coefficient; S.E = standard errors associated with the coefficients; β = exponentiation of the coefficients. P values in parentheses.

† $p \leq 0.06$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed tests);

¹Whites are the omitted as reference group; ²\$0 - \$19,999 omitted as reference group; ³Extremely important omitted as reference group

Discussion

This study documented how nativity is correlated with the odds of graduating from college in four years. Guided by two research questions, this exploratory analysis looked to see if there were differences in educational attainment between native-born and foreign-born students and if the Bourdieuan notions of capital serve to explain the variability for educational attainment based on nativity status. In reference to the first research question, this study found that independent of any other socio-demographic and cultural factors, nativity was marginally associated with the odds of graduating from college in four years.

Nativity Status and College Completion

In the unadjusted model, foreign-born students were marginally less likely to graduate from elite colleges within four years compared to their U.S. born counterparts. This partially answers the first research question that guides this study. For students who attend highly selective colleges and universities, being foreign-born only moderately reduces the odds of a four-year graduation. It is important to note that the National Longitudinal Study of Freshman is composed of respondents from highly selective universities. Studies have supported the argument that students matriculating in selective institutions, when compared to moderately or non-selective institutions, are particularly disposed to complete a four-year college program because they have higher standardized test scores (Massey et al., 2003; Melguizo, 2008), come from a higher SES (Melguizo, 2008; Ballinger, 2007), are children of alumni (Ballinger, 2007), and/or have family members who expected a high level of educational attainment (Melguizo, 2008). It stands to reason to suspect that the decrease in likelihood in this dataset can be found to a greater degree with data from the less selective institutions.

Based on the literature, language appeared to be a strong reason why foreign-born students would have significantly lower odds of graduating compared to students born in the United States (Bifuh-Ambe, 2007; White & Kaufman, 1997; Gandara & Rumberger, 2009). In this sample, any lack of familiarity with the English language, and the subsequent gaps in content knowledge, resulted in a moderate decrease in odds of graduating from a selective four-year institution for foreign-born students. However, it was not possible to determine the impact of language, or the students' familiarity with English, since there was no such variable in the NLSF. One interviewee from the case study conducted by Bifuh-Ambe (2007) suggests that language may be less of a barrier than one would think. Dr. Wagner states, "The strength of international students is that...they have come thousands of miles from home. They have spent all the money they have, sometimes the money that someone else has, and they see it as an obligation to succeed" (Bifuh-Ambe, 2007, p. 30). Ultimately, Dr. Wagner is arguing that foreign-born students are willing to work harder and for longer durations to simultaneously learn the English language and the course content. This sentiment could also contribute toward the higher-than-expected odds of completing college for foreign-born students.

Race, Gender, and College Completion

With this sample of selective institutions, a student's ability to graduate within four years is moderately affected by nativity status. However, once I control for race, this effect disappears. This implies that race is a more important factor to successfully graduating within four years than nativity status, which is consistent with a robust body of literature which asserts that Black and Hispanic students traditionally have lower graduation rates compared to White and Asian students (Baum & Flores, 2011; Pearce & Lin, 2009). The effects of race on graduation rate from highly selective institutions seem to corroborate the robust body of literature on race and

graduation rates overall. In this sample of students from highly selective institutions, Black students were less than half as likely as White students to graduate within four years. In the same model and when compared to White students, Hispanic students were a little over half as likely to graduate within four years. In the regression models, there were no significant effects when looking at likelihood of Asian students graduating within four years.

Even though Hispanic students in the sample have the expected lower odds of graduating when compared to their White counterparts, there is a questionable finding in terms of nativity status and Hispanic origin. In 2007, a little under the majority (48 percent) of the Hispanic population reports being born outside of the United States (U.S. Census Bureau, 2010). The fact that the majority of the Hispanic students in this sample are native-born has probably artificially increased the odds of a Hispanic student graduating within four years. Perhaps the odds of a Hispanic student from a more representative sample graduating within four years from a selective institution from are drastically lower. There is support for this when considering how the odds of graduating for Hispanic students are much higher in the full model.

The effect of a majority native-born Hispanic population could also have explained the unexpectedly higher odds of graduating for foreign-born students and why nativity has no effect after accounting for race and gender. Hispanic students graduate at a lower rate from four year institutions compared to White students, controlling for income (Perna, 2000; Rivas-Drake & Mooney, M., 2009). In this sample with the full model, the Latino students were just as likely as the White students to graduate within four years. It stands to reason that Latino students at highly selective colleges are indeed different from non-native Latinos from a more representative sample. This phenomenon may be why nativity isn't as significant as hypothesized.

Within this sample of students from highly selective institutions, males are less likely to graduate than females. This finding is supported by the majority of the literature on the gender gap in educational attainment (Crissey et al., 2007).

Effect of Capital on College Completion

The second research question was to examine whether cultural and economic capital were associated with the odds of a student graduating from college or university in four years. From the regression model, participating in high arts and sciences--namely being taken to art museums, science museums, and plays or concerts by older family members--increases the odds of graduating from an elite institution. This finding agrees with the majority of other studies that have operationalized cultural capital as participation in the high arts (Clegg, 2011; DiMaggio, 1982; Kraaykamp & van Eijck, 2010). Although being taken to museums, concerts, and plays can be seen as an investment in academics, the parental academic investment index, in the form of assistance with homework, has no effect on the odds of graduating for foreign-born students. It could be that the effect of being taken to museums, concerts, and plays is far greater than the effect of being helped with homework, resulting in an insignificant effect of the latter on graduating within four years.

On the other hand, punishments and limitations from the parents seem to moderately decrease the odds of successfully graduating within four years. This is in accord with the majority of scientific studies that associate an authoritarian parenting style with lower academic achievement. This relationship is contradictory to the popular notion that discipline may provide the necessary structure to increase academic achievement. Instead, studies show how extrinsic motivation to learn may be detrimental to academic performance (Cogen, 2001; Schwartz, 2009). Punishments may sometimes have a positive effect on academic motivation. But, Cogen (2001)

has found that the effect tends to be temporary, arguing that the temporary positive effect of punishment is the result of a treatment of the symptom.

Furthermore, Lareau (2002) has done extensive work in determining the difference in parenting between middle class and working class parents. In a small data set collected using ethnographic methods, Lareau (2002) has found that middle class parents are more permissive while working class parents are more authoritative. The difference is very telling in how the two economic classes discipline their children. Lareau (2002) found that “middle class parents stress language use and the development of reasoning and employ talking as their preferred form of discipline” (360). In comparison, “working class and poor parents issue many more directives to their children and, in some households, place more emphasis on physical discipline than do the middle-class parents” (Lareau, 2002, p. 360). Since authoritarian households promoting an external source of motivation are more predominately working class or poor, students from poor families are especially less likely to graduate within four years.

After controlling for race, cultural capital, and economic capital, nativity has no influence on the likelihood of graduating within four years. This suggests that the accumulation of capital helps to mitigate the small negative effect of being foreign-born and the larger negative effect of race in terms of graduating within four years. Before controlling for cultural and economic capital, the Black and Hispanic students were around less than half and a little over half, respectively, as White students to graduate within four years. However, once cultural and economic capital were taken into consideration, there was an increase in odds of graduating within four years for Black and Hispanic students compared to White students. Black students became a little over half as likely as White students to graduate within four years, controlling for nativity status, cultural capital, and economic capital. For Black students, the combination of

cultural capital and economic capital seem to partially overcome the negative effects of race or nativity status. Nevertheless, the effects of both types of capital are not powerful enough as factors that completely mitigate the negative effects of race and nativity status for Black students.

Hispanic students saw greater improvements in the odds of graduating once cultural and economic capital are taken into consideration. In the model controlling for nativity status and cultural capital, Hispanic students are three-quarters as likely as White students to graduate from elite institutions within four years. After the addition of economic capital, Hispanic descent seems to have no effect on the likelihood of graduating within four years. This seems to suggest that both cultural and economic capital together seem to help Hispanic students have similar odds of graduating within four years, compared to White students. However, since this sample of Hispanic students is not representative of the larger Hispanic population, it is possible that cultural and economic capital are only as effective on native-born students who matriculate in selective institutions.

Baum & Flores (2011) had concluded that the achievement gap can largely be attributed to the difference in SES between Black, Hispanic, and White students. This current study supports the findings from Baum & Flores (2011) since the odds of graduating for Black students increase when controlling for economic capital. For Hispanic students, race seems to no longer be an issue when controlling for economic capital. Altogether, in this analysis and with this data, race is more important than nativity status when determining a student's likelihood of graduating within four years.

Ultimately, there are three important factors that consistently increase a student's likelihood of graduating within four years. Based on data in the NLSF, students who are White,

native-born, and 400% above the FPL were most likely to graduate within four years. Since this demographic is traditionally known to be the most likely to have a high educational attainment, the findings reinforce the importance of institutional practices that help minimize disadvantages for students based on capital accumulation.

Limitations

This study was restricted by at least four factors. First, this sample was comprised of students matriculating into the most selective colleges and universities in the country (Table 2A). Therefore, the results from this study may be limited in the extent to which they can be generalized to the overall population and therefore may not be reflective of students who attend less selective colleges and universities.

Secondly, the majority native-born Hispanic sample in the NLSF has perhaps masked the true effects of both nativity and Hispanic descent on graduation rate. The Hispanic sample in the NLSF is not representative of the larger Hispanic population in the United States.

Thirdly, the variables included in the model were from a secondary data source. While the NLSF dataset contains contextual information related to students' developmental upbringing, the data's unsuitability for a more nuanced examination of nativity might have limited the efficacy of this study. For example, the level of development in Asian countries varies vastly and would have significant impact on the opportunities for primary or secondary education. The lack of data on language-use also limits the depth of this study. Based on the literature, a greater negative effect of foreign nativity on graduation rates was expected. In the findings obtained from the NLSF, being foreign-born had only a marginally negative effect on graduation rates. With data on how respondents use English daily, it is possible to better determine whether the

marginal effect in the NLSF can be attributed to the respondent already having proficiency or familiarity with English.

Finally, the low number of foreign-born students ($n = 504$) may have limited the applicability of this study. Of the 504 foreign-born students, the majority were Asian (255) and Hispanic (149). Certainly, the low number of foreign-born Black (63) and White (37) students limits its use to be generalized to the larger population of foreign-born students.

Implications

This study suggests that the achievement gap extends beyond the most prominent areas: public schools that serve low-income, racially-segregated areas (Mangiante, 2011; Berliner, 2011). Although the college completion rate for these highly selective institutions is much higher than the national average, the rate is a misrepresentation of success. This study has found that the achievement gap by race exists also in elite institutions. Specifically, Black and Hispanic students have disproportionately lower odds of graduating, despite having the merit to matriculate in a highly selective institution.

Theoretically speaking, these preliminary findings suggest that Bourdieu's theory has applications in the study of educational achievement with foreign-born students. More specifically, this study corroborates the relationship between the embodied form of cultural capital and the institutional form of cultural capital and extends it to the study of the foreign-born educational attainment. The embodied state entails the transfer of knowledge, skills, and advantages to an individual, typically from the family through socialization, over a longer period of time (Bourdieu, 2008; Kraaycamp & Eijck, 2010). From this study, I found that the native-born Black and Hispanic students who originally had a lower chance of graduating saw increased odds of graduating once the accumulation of cultural capital was taken into consideration.

Graduating successfully would then bestow academic credentials, an institutionalized form of cultural capital (Bourdieu, 2008; Clegg, 2011).

The findings here support the argument that those starting in the educational system with less cultural capital seem to be at a disadvantage. Dumais and Ward (2010) concluded that the middle- and upper-class families are more likely to have cultural capital that conforms to the habitus of schools than do working- and lower-class families. This is evident in the regression analysis where cultural and economic capitals have the most powerful effect in increasing the odds of graduating within four years.

Future Studies

This study and further inquiries to the differences in capital accumulation between native-born and foreign-born students would benefit from a more inclusive dataset. There are two ways to ensure a more representative sample. The first is to obtain a sample that includes students from less selective colleges and universities. This will ensure that the findings can be generalized to institutions where the study of the academic success of foreign-born students may be most needed.

Secondly, a strong dataset like the NLSF would have far more valuable uses if the data for foreign-born students also included the level of development of the country of birth as well as the use of the language. This is important because of the differences in how access to educational resources or availability of social liberties lend toward educational achievement. This would give more meaning to the study of impact of capital accumulation in the United States foreign-born population.

Appendix

Table 1A *Factor Analysis for Cultural Capital Variables*

	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>
<i>How often did your parents or older siblings:</i>	<i>Participation in High Arts & Sciences</i>	<i>Parental Academic Investment</i>	<i>Parental Punishments & Limits</i>
take you to a science center or museum at age 6	0.64	0.45	-0.08
take you to an art museum at age 6	0.63	0.27	0.03
take you to an art museum at age 13	0.69	-0.04	0.08
take you to a science center or museum at age 13	0.69	0.34	0.17
take you to plays or concerts at age 13	0.59	-0.06	-0.09
take you to museums in the last year of HS	0.63	-0.12	-0.15
check if you'd done your homework at age 6	0.52	0.66	-0.13
help you with your homework at age 6	0.53	0.72	-0.08
check if you'd done your homework at age 13	-0.05	0.83	0.24
help you with your homework at age 13	-0.18	0.82	0.13
check if you'd done your homework in the last year of HS	-38	0.71	0.25
help you with your homework in the last year of HS	-0.37	0.69	-0.08
punish you for bad grades at age 13	0.37	-0.09	0.62
punish you for disobedience at age 13	0.29	0.15	0.65
limit your time spent with friends at age 13	0.31	0.22	0.58
punish you for bad grades in the last year of HS	0.42	-0.19	0.59
punish you for disobedience in the last year of HS	0.36	0.03	0.63
limit time spent with friends in the last year of HS	0.32	0.10	0.58

SOURCE: National Longitudinal Survey of Freshmen (Fall 1999 - Spring 2003). NOTE: N=3,176

Table 2A *NLSF participating institutions, student makeup, and graduation rates*

	Students participating in the NLSF*	Graduation Rate**
Liberal Arts Colleges (9)	311 (9.8)	
Barnard College	57 (1.8)	79.1
Bryn Mawr College	37 (1.2)	79.8
Denison Univ.	39 (1.2)	81.3
Kenyon College	41 (1.3)	84.8
Oberlin College	79 (2.5)	49.0
Smith College	41 (1.3)	77.7
Swarthmore College	47 (1.5)	88.8
Wesleyan University	94 (3.0)	89.1
Williams College	91 (2.9)	91.0
Private Research University (14)	1876 (59.1)	
Columbia Univ.	237 (7.5)	84.6
Emory Univ.	197 (6.2)	82.4
Georgetown Univ.	89 (2.8)	88.9
Miami University (OH)	204 (6.4)	67.7
Northwestern Univ.	224 (7.1)	86.3
Princeton Univ.	86 (2.7)	90.1
Rice Univ.	97 (3.1)	79.2
Stanford Univ.	216 (6.8)	78.4
Tufts Univ.	83 (2.6)	86.5
Tulane Univ.	221 (6.7)	58.5
University of Pennsylvania	220 (6.9)	88.6
University of Notre Dame	91 (2.9)	90.0
Washington Univ.	90 (2.8)	85.9
Yale Univ.	89 (2.8)	96.0
Public Research University (4)	989 (31.1)	
Penn State	66 (2.1)	62.3
Univ. of Cal-Berkeley	304 (9.6)	68.9
Univ. of Michigan-Ann Harbor	362 (11.4)	72.0
Univ. of North Carolina-Chapel Hill	268 (8.4)	74.9
Historically Black Colleges (1)		
Howard Univ.	60 (1.9)	47.8

*Total number, percentage in NLSF in parentheses (total n = 3,176)

**Four-year rates from the Chronicle Graduation Data

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