Spring 5-16-2014

The Influence of Cultural and Social Capital on Post-Baccalaureate Students' Decision to Enter and Complete Graduate School

Kelly L. Alig
University of New Orleans, kmalig@uno.edu

The Influence of Cultural and Social Capital on Post-Baccalaureate Students' Decision to Enter and Complete Graduate School

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements of the degree of

Doctor of Philosophy
in
Educational Administration
Higher Education

by

Kelly Landry Alig

B.S., Louisiana State University Medical Center, New Orleans, 1993
M.A., Texas Woman's University, 2001

May 2014

Acknowledgements

A great mentor and friend, Dr. Maralynne Mitcham, in her 2014 Eleanor Clarke Slagle lecture, mentioned that gratitude was something frequently offered at the end of a speech, which seemed like an afterthought. Thus, in her spirit, I would like to first express my gratitude to those people who have made this accomplishment possible.

I want to thank my parents, Diane and Leonard Landry, who instilled in me the value of education. They raised me to believe that college was a given, not a decision. Though their inquiries about my grades and emphasis on hard work sometimes bordered on harassment even long after they were financially responsible for my educational pursuits, I appreciate all of their encouragement and support. My mother has always been my greatest cheerleader. I remember how devastating it was to realize that she would likely not be around to celebrate the achievement of my Ph.D. In fact, she was admitted to hospice and passed away during my very first semester of enrollment in the doctoral program. I know she has been there in spirit every step of the way, and, at times, I could faintly here her saying, "Go Kelly, go Kelly, go Kelly, go!" as I was feverishly working to complete a paper or project. I know that she is proud of the perseverance I have had to get to this point.

I am grateful for my thesis chair at Texas Woman's University, Dr. Janette Schkade, who first planted the seed that I further my education. In inspiring me to finish my master's, she explained that I needed to be doing doctoral work. I appreciate her recognizing something I had not previously seen in myself that led me to aspire to a terminal degree.

I have found that most doctoral journeys are riddled with challenges. Mine has seen many hills and valleys, yet I see this as a typical part of life. It has been filled with lots of joy (the birth of my two children), sorrow (the loss of my mother and grandmother, several mentors, and one

of my dissertation committee chairs, Dr. Marietta Del Favero), and everything that came with surviving the effects of Hurricane Katrina. I have learned that I am both resilient and persistent.

I would like to thank all of the faculty members I have worked with over the years at the University of New Orleans, especially those on my committee. Dr. Tammie Causey-Konate', my major professor, has been an inspiration and a wealth of knowledge throughout the process. I am so thankful she willingly and enthusiastically took on my project on the last and most grueling part of the journey. As a new and very busy faculty member in the department, Dr. Brian Beabout agreed to be a part of my committee. I appreciate his expertise, constructive criticism, and questioning. He pushed my thinking much further than I would have done on my own. I am so grateful to Dr. Louis Paradise and the multiple classes I took with him while in the program. I am appreciative of Dr. Paradise's realistic, positive approach to the dissertation process. The first research class I took with him inspired this study, and he has always made my doctoral degree completion feel like a manageable undertaking. Along the way, I was so honored to have one of my colleagues at Louisiana State University Health Sciences Center - New Orleans (LSUHSC-NO), Dr. Sheila Chauvin, represent the other (healthcare) side of my academic life. She works tirelessly at our institution to elevate the quality of instruction offered and to promote the scholarship of teaching and learning. I am thankful to have such a strong, talented woman as a role model here on campus.

I appreciate all of the support and inspiration I have received over the years from my family, friends, and colleagues and students from the Department of Occupational Therapy at LSUHSC-NO. I would not have been able to do this without you all.

Finally, I would like to express my gratitude to my husband and children. I appreciate all of your support and patience. Andrew Alig, you are the best husband on the planet! You set the

gold standard for which all others are to be compared as a partner in this process. To Parker and Avery Alig, thank you for allowing Mommy to get her work done. I apologize for the time I have had to sacrifice away from you in order to achieve this goal. The two of you are my greatest accomplishments. I love you all and look forward to all of the things we can experience with my newly increased free time.

Table of Contents

List of Figures and Tables

Abstract

Despite increased diversity noted in undergraduate education in recent years (Antonio, 2003), students from non-majority groups continue to be underrepresented in graduate school. Many research studies (Perna, 2000, 2004; Perna & Titus, 2005; Rowan-Kenyon, 2007; Walpole, 2003, 2007b) have used measures of cultural and social capital to increase the explanatory power of the traditional econometric framework in college choice models, but have not used these sociological variables as a primary focus. The purpose of this correlational study was to explore the influence of cultural capital and social capital on the decision of bachelor's degree completers to enter graduate school and ultimately to degree achievement. The study is an extension of Perna's 2004 work, which examined similar relationships of cultural and social capital variables via use of the *Baccalaureate & Beyond: 93/97* study. Based on Walpole's findings (2003), variables related to socioeconomic status (SES) were also included in my analysis.

The data used to answer the research questions were collected as part of a longitudinal study, the *Baccalaureate & Beyond: 93/03*. Participants in the *Baccalaureate & Beyond: 93/03* study were students in the U.S. who earned a bachelor's degree during the 1992-1993 academic year, representing a population of 1.2 million individuals (Choy, Bradburn, & Carroll, 2008). My findings revealed that measures of cultural and social capital have a significant influence on graduate school enrollment and degree completion. Among low SES students (as designated by family income) cultural and social capital variables substantially increased the likelihood of graduate degree attainment.

Keywords: Higher education, graduate school enrollment, graduate degree attainment, cultural capital, social capital

Chapter 1

Introduction

Problem

The quest for diversity in institutions of higher learning in the United States has been long-standing. In 1976, 16% of undergraduate students were from non-majority groups (i.e., Black, Hispanic, Asian/Pacific Islander, and American Indian/Alaska native), while only 10% of students enrolled in graduate-level education programs (master's, first-professional, and doctoral) were from non-majority groups (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics [NCES], 2010). Over the last few decades, an increase in diversity has been noted as non-majority students have made significant advances in gaining access to higher education (Antonio, 2003). According to NCES, approximately one out of every three undergraduate degrees in 2008 was conferred to non-majority students at four-year institutions (2010).

Though non-majority students account for an increasingly larger percentage of those receiving bachelor's degrees, a gap still remains in the achievement of advanced degrees (Perna, 2004). In 2008-2009, members of non-majority groups (i.e., Black, Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native) accounted for the achievement of 23.4% of master's degrees, 26.5% of first-professional degrees, and 16.5% of doctoral degrees. The same trend has been found among economically and educationally challenged (EEC) students (Walpole, 2007a). "EEC students" is an umbrella term proposed by Walpole (2007a, p. 15) to include low-SES, low-income, first-generation, and working-class students. Though all students in the EEC group may not be both economically *and* educationally challenged, they still cope with similar difficulties in gaining college access, have comparable experiences during college,

and experience like outcomes (Walpole, 2007b). Though some EEC students do attend college, they are less likely to pursue graduate education (Walpole, 2003).

Although progress has been made in terms of the number of individuals among non-majority groups enrolling in some post-baccalaureate programs, student diversity numbers do not reflect the current U.S. population, and will likely not keep up with projected changes in demographics (Weinburg, 2008). Refer to Table 1.

Table 1

Percentage Distribution of the U.S. Population by Ethnicity and Undergraduate Enrollment

Ethnicity	**Census Data**		**Undergraduate Enrollment**	
	2000	2010	2000	2010
White	75.1	72	74.6	66.6
Black	5.5	13	11.2	14.5
Hispanic	12.5	16	6.9	10.6
Asian/Pacific Islander	3.6	5	6.5	6.4
American Indian/Alaska Native	.9	.9	.9	.9
Nonresident alien	N/A	N/A	N/A	N/A

Source: (U.S. Census Bureau, 2002; 2011; NCES, 2012)

From 1998-99 to 2008-09, all ethnic groups (except White) have demonstrated an increase in the number of individuals receiving bachelor's, master's, first-professional and doctoral degrees (NCES, 2011b). According to 2010 Census data (2011), White Americans make up 72% of our country's population, which is 3.1% lower than the 75.1% noted in 2000. In 2008-2009, 71.5 % of bachelor's degrees were awarded to White students. During this same time period, 64.6 % of master's degrees, 71.1% of first-professional degrees, 58.6% of doctoral degrees were completed by White Americans. In 2010, Black Americans comprised 13% of the total U.S. population. The percentage distribution of Black Americans in the U.S. has more than

doubled since 2000. In comparison, however, in 2008-2009, only 9.8% of bachelor's degrees were awarded to Black Americans. Further, in 2008-2009, Black Americans received 10.7% of master's degrees, 7.1% of first-professional degrees, and 6.5% of doctorates in the U.S. (NCES, 2011b). Though the number of Black Americans has increased of late, NCES data do not show a proportional increase in the percentage of Black individuals completing advanced degrees. During 2008-2009, the percentage of the U.S. population comprised of Hispanic individuals increased from 12.5% to 16%. Between 1998-1999 and 2008-2009, only 8.1% of bachelor's degrees, 6% of master's degrees, 5.5% of first-professional degrees, and 3.8% of doctoral degrees were awarded to Hispanic Americans. Though the pace is slow, progress is being made. Refer to Table 2 and Figure 1.

Table 2

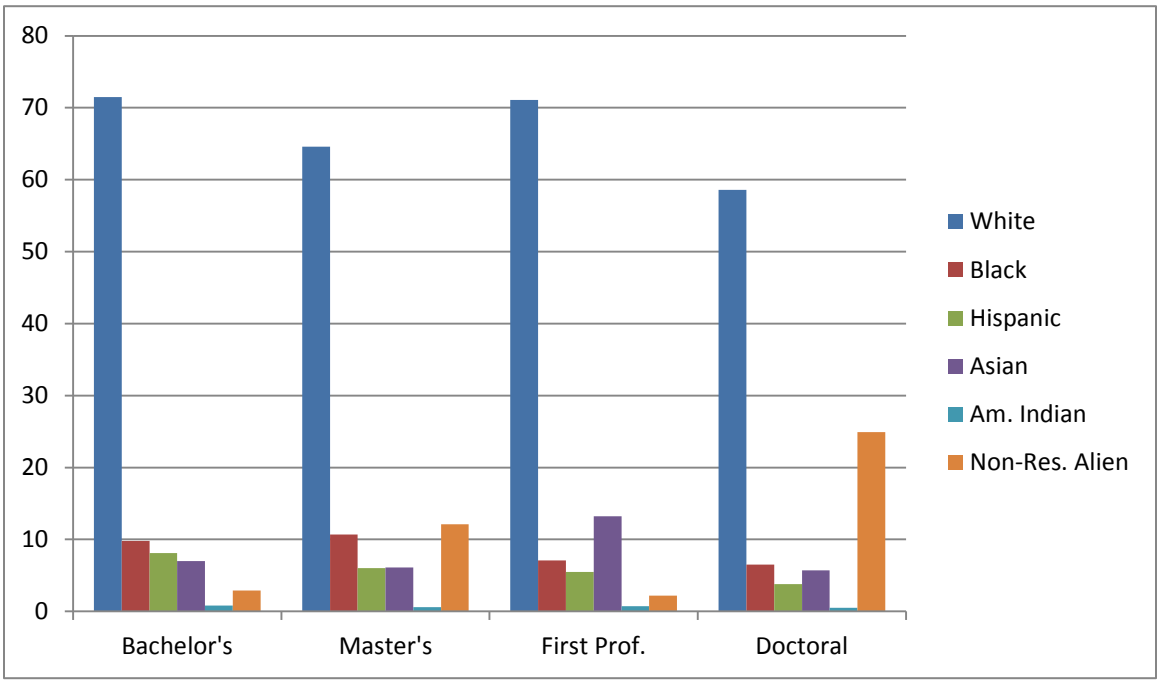
Percentage of Individuals from Race/Ethnic Groups Completing Each Degree Type in 1998-1999 and 2008-2009

Ethnicity	**Bachelor's**		**Master's**		**First Prof**		**Doctoral**	
	98-99	08-09	98-99	08-09	98-99	08-09	98-99	08-09
White	75.6	71.5	71.2	64.6	74.9	71.1	63.2	58.6
Black	8.5	9.8	7.4	10.7	6.8	7.1	4.8	6.5
Hispanic	5.8	8.1	4.1	6	4.9	5.5	3.0	3.8
Asian/Pacific Islander	6.2	7	5	6.1	10.4	13.2	5.2	5.7
American Indian/Alaska Native	.7	.8	.5	.6	.8	.7	0.4	0.5
Nonresident alien	3.2	2.9	11.8	12.1	2.2	2.2	23.4	24.9

Source: (NCES, 2011b)

Figure 1

Percentage of Individuals from Race/Ethnic Groups Completing Each Degree Type in 2008-2009



Source: (NCES, 2011b)

Bowen and Rudenstine (1992) suggested some possible explanations for the underrepresentation of non-majority groups in graduate programs. After White students, the largest group completing doctoral programs was nonresident aliens (individuals who are not U.S. citizens and do not meet the green card or substantial presence test [Internal Revenue Service, 2012]), most of whom are male. Bowen and Rudenstine (1992) found that outcomes (i.e., pursuit and completion of graduate study) were significantly dependent upon an individual's chosen field of undergraduate study. Further, non-majority groups (i.e., females, Blacks, and Hispanics) were more likely to major in fields in which bachelor's degree completers are less likely to enroll in Ph.D. programs, such as communications. Thus, the socialization of undergraduate students in these majors does not include a strong emphasis on graduate education.

In general, Blacks and Hispanics are less likely to obtain doctoral degrees. Bowen and Rudenstine (1992) hypothesized that lower percentages of doctoral enrollment and persistence to degree completion are equally responsible for the underrepresentation of non-majority groups (students who are female, Black, or Hispanic). According to Bourdieu's Theory of Social Reproduction, majority or dominant groups maintain their class status and power by marginalizing non-majority (minority) groups through cultural alienation and annihilation (Freeman, 2006). The primary way the dominant culture in the U.S. did this was through the transmission of education. Thus, non-minority groups in the U.S. were denied equal access to education (Freeman). Bowen and Rudenstine (1992) concluded that the underrepresentation of all non-majority groups was present at all levels of education. Thus, non-majority groups with a smaller enrollment in bachelor's programs would certainly translate into an even smaller enrollment percentage at the graduate level. In 1990, ethnic minorities accounted for just 20% of those receiving graduate degrees. Over the past twenty years, those numbers have increased only by 7% (NCES, 2011a). Recent statistics demonstrate that the gap between majority and non-majority students' graduate school attendance is closing. Though slow, it is important that this progress continues.

There are several compelling reasons for increasing the diversity of individuals with advanced degrees, as demonstrated in both education and in healthcare. Research has shown that faculty diversity can enhance the student learning experience and career success (Trower & Chait, 2002). The Bernard Hodes Group (2003), on behalf of The PhD Project, conducted a survey to determine the impact that minority faculty members have on their students. The group found that minority professors are positively impacting the education of both minority and non-minority students. Further, respondents explained that minority faculty members have a positive

impact on their students because they serve as role models, they provide a unique racial perspective, and their presence can help dismiss stereotypes (Bernard Hodes Group, 2003). Trower and Chait (2002) also found that "who teaches matters" (p. 34). For example, they found that the percentage of female faculty members at a college or university is the most accurate predictor of degree completion for female doctoral students.

The benefits of a diverse workforce are also realized in healthcare, in which preparation is achieved at the master's (physician assistant, occupational therapy, and speech-language pathology), first-professional (physician), and doctoral level (pharmacy, physical therapy, and audiology). Results from a survey completed by the U. S. Department of Health and Human Services Health Resources and Services Administration, Bureau of Health Professions (2006) demonstrated that patients from minority groups receive an improved quality of healthcare when seen by medical professionals of the same race/ethnicity. One major conclusion from the study was that an increase in the diversity of health professionals would allow patients from minority groups to have a greater opportunity to be treated by practitioners of their own racial or ethnic background. Researchers speculate that patients from minority groups treated by educated professionals of the same race/ethnicity would potentially have improved interpersonal care and an increased likelihood of obtaining and accepting appropriate medical care, therefore leading to better overall health (U.S. Department of Health and Human Services Health Resources and Services Administration, Bureau of Health Professions, 2006).

Previous research has been conducted to determine which factors are most influential in determining which individuals will decide to attend college, and later, graduate school (McDonough, 1997; Perna, 2000, 2004, 2006; Perna & Titus, 2005; Rowan-Kenyon, 2007; Walpole, 2003, 2007b). College choice includes not only where a student decides to attend

college, but the earlier decision of whether an individual will actually choose to go to college. One of the most significant factors related to college choice is the concept of cultural capital (McDonough, 1997). Bourdieu (1986) defined cultural capital as the cultural resources that allow individuals from any background to gain access to power. Cultural resources include high status cultural knowledge about subjects like art and music, characteristics and habits that are considered to have high status value (such as one's dialect or accent), and educational credentials (Horvat, 2003; Kraaykamp & van Ejick, 2010). Within middle and upper class families, obtaining a college education is the method by which individuals ensure maintenance of economic security (McDonough, 1997). Students from low SES backgrounds also understand the importance of a college education to future economic security, but begin the college choice process much later than their peers from high and middle SES backgrounds. If low SES students have parents who did not attend college, then the idea of attending college is usually triggered by high school personnel, such teachers or counselors (McDounough, 1997).

Habitus is the structural framework and lens for the perception of one's cumulative cultural capital, and functions at a level below that of consciousness and communication. One's development of habitus begins early on in childhood, and continues into adulthood. Habitus includes the way a person may walk, talk, or gesture; it defines a lifestyle (Winkle-Wagner, 2010). Social capital, closely tied to cultural capital, consists of social networks that can be used as methods to gain access to human, cultural, and other types of capital, in addition to institutional resources and support (Perna, 2004; Perna & Titus, 2005). Some examples of social capital include parental involvement through the relationship between a student and his or her parents, peer networks, and assistance from counselors or teachers in the college choice process (Perna, 2006).

Bourdieu's concepts of cultural capital, social capital, and habitus, along with individual characteristics and aspirations, are commonly identified as factors that influence whether an individual chooses to pursue both undergraduate and graduate degrees (Perna, 2004). Thus, it is assumed that those social groups that are underrepresented in the attainment of graduate degrees are thought to possess lower levels of cultural and social capital. The purpose of this study is to further explore the influence of cultural and social capital on bachelor's degree completers' decision to enter and ultimately complete graduate school.

Statement of Purpose

While variables related to cultural and social capital have been part of college choice research at the undergraduate and graduate level (Pearce & Lin, 2005; Perna, 2000, 2004; Perna & Titus, 2005; Rowan-Kenyon, 2007; Walpole, 2003, 2007b), no research has focused specifically on the variables related to cultural and social capital (i.e., parental educational attainment, language most often spoken in the home, total direct contribution from parents for college expenses, measures of undergraduate institutional quality, and proximity of institution from student's home) that increase the likelihood that an individual will decide to pursue graduate work. To date, several studies have utilized variables related to cultural and social capital to help improve the explanatory power of the traditional econometric model in determining predictors of four-year college and graduate enrollment among groups divided according to gender and race/ethnicity (Perna, 2000, 2004). Other studies utilize cultural and social capital variables as factors that may increase the likelihood that an individual will attend college (Perna & Titus, 2005; Rowan-Kenyon, 2007).

This correlational study utilized quantitative methodology in an attempt to examine the direct influence of cultural and social capital on graduate enrollment and degree completion. In

addition, this study also incorporated Walpole's (2003) ideas regarding SES and its influence on graduate enrollment. Walpole found that SES had a significant influence on graduate school attendance, as those students from high and middle SES backgrounds had a much greater likelihood of persisting to graduate school enrollment and degree attainment than their low SES counterparts. Further, these findings are congruent with Bourdieu's (1986) earlier ideas about the propagation of the upper and middle class. In this study, because of data set limitations, SES was operationally defined as parental income.

The data that were used to answer the research questions were collected as part of a longitudinal study, the *Baccalaureate & Beyond: 93/03*. The *Baccalaureate & Beyond: 93/03* study is the third follow-up survey of a national study designed to provide information of entry into and progress through graduate-level education and the workforce after completing a bachelor's degree (NCES, n.d.). In addition, the third follow-up tracks entry into graduate school and long-term employment experiences.

In order to determine how adding measures of cultural and social capital impacted the traditional econometric model, Perna used multinomial logistic regression analyses in her 2004 study. The addition of cultural and social capital variables to the model that consisted of expected costs and benefits, financial resources, and academic abilities established statistical significance to the improvement in fit of the model, as demonstrated by the -2 log likelihood (Perna, 2004). Further, Perna performed likelihood ratio tests and found that specific measures of cultural capital (parent education) and social capital (Carnegie classification of the undergraduate institution and attendance at a 2-year college/university), along with measures of

gender, race/ethnicity, expected costs and benefits, and financial and academic resources, were statistically significant in influencing post-baccalaureate enrollment.

In contrast, the proposed study attempted to determine which variables related to cultural capital and social capital increase the likelihood of one's decision to attend and complete graduate school. Like Perna's study (2004), enrollment patterns of college graduates were established according to gender and race/ethnicity, but the current study used Walpole's findings (2003) and incorporated the enrollment and completion patterns of students from high and low SES backgrounds to establish which variables, related to cultural and social capital, increased the likelihood of enrollment in and completion of graduate programs among individuals from high and low SES backgrounds.

Perna (2004) used data collected from *Baccalaureate & Beyond: 93/97,* while this study used a more current update, *Baccalaureate & Beyond: 93/03*. Thus, data reflect graduate enrollment and completion 10 years post-bachelor's degree, instead of the 4-5 years post-college graduation in Perna's 2004 study. It was assumed that 10 years of data would yield a greater number of participants who have both enrolled in and completed graduate degree programs in order to have a larger sample with which to analyze the trends proposed by the current study. By 1997, 9.6 % of participants in the *Baccalaureate & Beyond: 93/03* study had attained a master's degree, and 1.9% had completed a first-professional or doctoral program (Choy et al., 2008). In comparison, the 2003 follow-up of the *Baccalaureate & Beyond: 93/03* revealed that 20.2% of participants had attained a master's degree, while 5.9% had attained a first-professional degree or doctorate. Instead of multinomial logistic regression used in Perna's study (2004), data analyses were performed through logistic regression and model-building in this study. Logistic regression

and model-building did not allow for analysis by graduate degree type, but were used to isolate the influence of the independent variables on the two dichotomous dependent variables.

Table 3

Comparison of Perna's 2004 Study and Alig's 2014 Study

Perna (2004)	**Alig (2014)**
Used measures of cultural and social capital to improve the explanatory power of the traditional econometric model in determining predictors of graduate school enrollment	Determined which cultural capital and social capital variables increased the likelihood of one's decision to attend/complete graduate school
Explored enrollment patterns of college graduates according to gender and race/ethnicity	Explored enrollment patterns of college graduates according to gender, race/ethnicity, and SES
Analyzed data from *Baccalaureate & Beyond: 93/97* (4-5 years post-baccalaureate degree completion)	Analyzed data from *Baccalaureate & Beyond: 93/03* (10 years post-baccalaureate degree completion)
Data analysis via multinomial logistic regression	Data analysis via logistic regression and model building

Research Questions

The research questions guiding this study were:

1. Which variables relevant to cultural capital (i.e., parental educational attainment, whether English is the most frequently spoken language in the home) increase the likelihood that an individual will decide to attend and complete graduate school?
2. Which variables relevant to social capital (parental financial support for undergraduate education, existence of social networks through Carnegie classification and tuition, and peer networks determined by location of the university) increase the likelihood that an individual will decide to attend and complete graduate school?

3. What are the graduate school enrollment and completion patterns of bachelor's degree completers by gender?
4. What are the graduate school enrollment and completion patterns of bachelor's degree completers according to race/ethnicity?
5. What are the graduate school enrollment and completion patterns of bachelor's degree completers from high SES and low SES backgrounds?
6. How do variables relevant to cultural capital influence graduate degree attainment among individuals from high SES and low SES backgrounds?
7. How do variables relevant to social capital influence graduate degree attainment among bachelor's degree completers from high SES and low SES backgrounds?

Demographic information about study participants was used as a means to compare the enrollment and completion patterns of individuals in graduate school, and these results are reported by gender, race/ethnicity, and SES background (high or low). Data analysis was performed through logistic regression. This type of regression is used when the dependent variable is dichotomous (Stevens, 2002), and it predicts the probability that an event will occur (Portney & Watkins, 2009). Within this study, logistic regression was used to determine the probability that each of the independent variables related to cultural capital (parental educational attainment and if English is the most frequently spoken language in the home), social capital (parental financial support for undergraduate education, existence of social networks through Carnegie classification and tuition, and peer networks determined by location of the university) , and SES (high SES [>$80,000] and low SES [<$39,999]) increased the likelihood that an individual decided to attend or actually complete graduate school. Next, logistic regression was used to evaluate the relationship between cultural capital and graduate school

enrollment/completion, social capital and graduate school enrollment/completion, and SES (family income) and graduate school completion. In addition, the influence of cultural capital and social capital variables was determined after controlling for traditional econometric variables through model building (Hosmer & Lemeshow, 1989).

Theoretical Framework

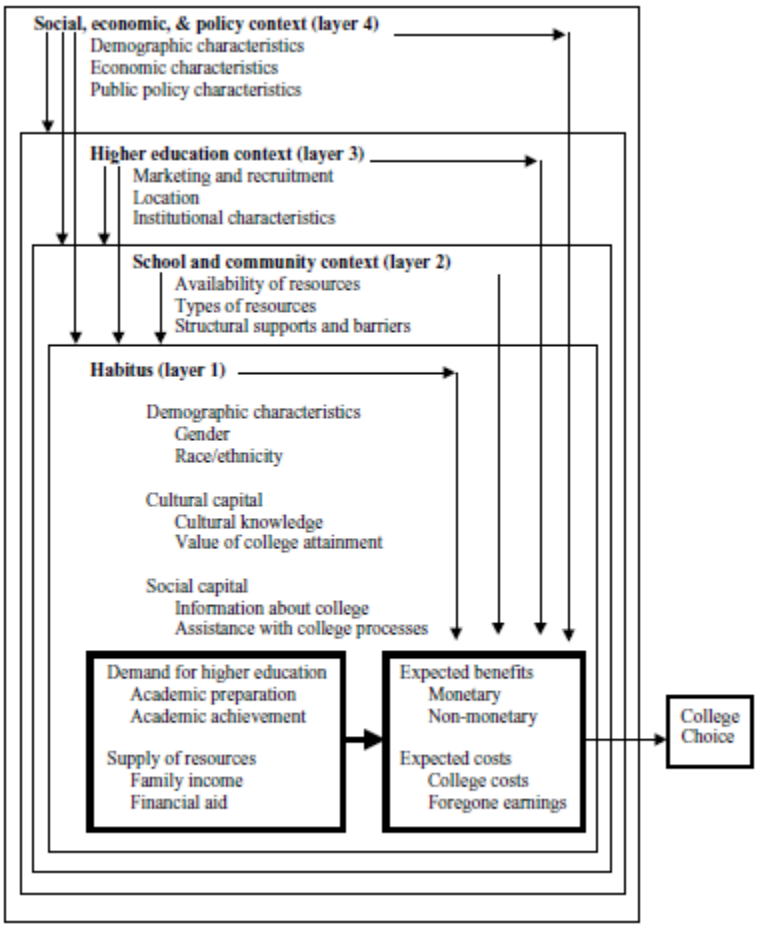
The theoretical framework for this study is based on Perna's proposed model for studying college access and choice (2006). The model combines a variety of concepts related to college choice, integrating both the economic model of human capital investment and the sociological model of status attainment. It assumes that a student's college choice is shaped by four contextual layers: the student's habitus (individual), school and community context (organizational), higher education context, and the social, economic, and policy context (Perna, 2006). The multiple layers are consistent with the belief that there is no singular path leading to college enrollment.

Within the first layer of Perna's model, habitus includes demographics, such as gender and race/ethnicity, cultural capital, and social capital (Perna, 2006). The second layer of the model represents the organizational context, which includes school and community. Based on the educational institution's (high school's) structure and resources available, the organizational context has the potential to support or hinder students' college choice. The higher education context, which comprises the third layer of Perna's model, characterizes the role institutions of higher learning play in the college choice process (Perna, 2006). Colleges and universities may influence students' college choice as a source of information to students and their parents about options for post-secondary enrollment, through the alignment of institutional characteristics consistent with students' self-identity, and because of the obtainability of enrollment (the number

of available slots for student admission). Last, the fourth layer, the social, economic, and policy context, takes into account how societal factors, financial conditions, and policy changes influence student college choice. Refer to Figure 2.

Figure 2

Perna's Proposed Model for Studying College Access and Choice (Perna, 2006, p.117, Fig. 3.1)



Source: Perna, L. (2006). Studying college access and choice: A proposed conceptual model. In J.C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. XXI, pp. 99-157). The Netherlands: Springer.

The current study was primarily focused on the first layer of Perna's conceptual framework (2006) in order to examine how demographics and cultural and social capital

ultimately influence graduate school enrollment and completion. Because Perna's conceptual framework was designed to examine student college choice at the undergraduate level, my study encompassed all layers of the model as the decision to enter graduate school considers all of these factors and focuses on a greater emphasis from the third layer, the higher education context.

The ability to understand cultural and social capital must occur within the context of Bourdieu's Theory of Social Reproduction (Horvat, 2003; Winkle-Wagner, 2010). Central to Bourdieu's theory are the concepts of habitus, capital, field, and taste. Habitus frames one's personal context. For example, when an individual considers which behavior to choose and implement in a social situation, the person heeds his or her own interpretation of societal rules (Horvat, 2003). In the educational setting, students may be rewarded or punished according to whether or not a teacher finds their behavior appropriate or not and appropriate to the field associated with a particular school or classroom (Winkle-Wagner, 2010).

Cultural capital is the currency, including skills, abilities, tastes, preferences, and norms, that is related to social class. It is used to obtain other forms of capital to maintain one's status or to facilitate upward mobility. It is obtained in two ways: through one's family and via education. Field is the space where cultural capital is produced and is assigned value. There are many different fields, and "it is only within a particular field that cultural capital holds value, produces an effect, or even exists" (Winkle-Wagner, 2010, p. 7). If cultural capital is emphasized as a social relationship, then the currency is considered refined (valued as high status) in certain social situations valid in a given field (Winkle-Wagner, 2010). For example, one's knowledge and familiarity of exclusive golf courses on the Professional Golfers' Association (PGA) of America Tour may be valued among a group of players during a round of drinks at the 19th hole,

but this same knowledge shared among attendees at an art gallery opening may not be quite as impressive.

The idea of lifestyle within Bourdieu's theory is exhibited through the notion of taste (Winkle-Wagner, 2010). Taste is an acquired appreciation of preferences identified as a part of one's social class. It can include one's preferences for art, books, television, movies, food, clothing, mannerisms, behaviors, or speaking style. In exhibiting taste, an individual is expressing his or her class status. Depending on the field, taste may act as cultural capital or currency within the social realm.

Social capital includes one's social networks and connections that also function as currency to obtain additional capital to maintain or increase one's status (Winkle-Wagner, 2010). Social capital indicates a sense of acknowledgement between people, consisting of honor and respect. Like cultural capital, the value placed on social capital is only relevant in certain fields. For instance, one's social connections may be rewarded in a certain social setting, but this does not guarantee that the same degree of value will be placed on the social connections in another situation.

The concepts of cultural capital and habitus inside a specific context (field) explain the method by which "societal structures and opportunities combine with individual aspirations to reproduce the existing social structure" (Walpole, 2007b, p. 240). Simply, each social group or class has its own forms of capital (e.g., economic, cultural, social) that parents or guardians transfer to their children in the form of values, beliefs, or conduct. Children use these forms of capital as investments for social advancement (Lamont & Lareau, 1988). Within this belief system, education is utilized for its conversion potential (Walpole, 2007b).

All social groups possess their own types of cultural capital. The value or worth of cultural capital depends on the dominant group, the upper-middle to middle class (Lamont & Lareau, 1988). Individuals from the upper and middle class hold high status cultural capital, while those from the working and lower class possess lower status cultural capital (DiMaggio, 1982; Walpole, 2003). Students from the dominant class come into the educational system with essential social and cultural cues, while working class and lower class children must obtain the knowledge and skills to negotiate their educational experiences after entering school. This is because, according to Lamont and Lareau (1988), "schools are not socially neutral institutions but reflect experiences of the 'dominant class'" (p. 155). Although students from the non-dominant class are able to develop the social, linguistic, and cultural competencies that embody the upper-middle and middle class, working or lower class students are not able to realize the same skills of those born to the dominant culture and are educationally penalized based on this foundation. "Because differences in academic achievement are normally explained by differences in ability rather than by cultural resources transmitted by the family, social transmission of privileges is itself legitimized, for academic standards are not seen as handicapping lower class children" (Lamont & Lareau, 1988, p. 155).

According to Lamont & Lareau (1988), Bourdieu viewed cultural capital as a way dominant groups denote cultural distance and immediacy, monopolize opportunities, and discount and employ new occupiers of high status positions. The actions of the dominant group lead to a culture of exclusion, which further decreases the power of non-dominant groups.

Walpole (2003, 2007b) contends that because educators value high status cultural capital, the students who possess it are rewarded, while those with lower status cultural capital are prone to a decreased amount of educational success. Working class or lower class students can acquire

high status cultural capital, but in order to receive the same opportunities as those individuals who are culturally privileged, lower class students have to work even harder to overcome their cultural "handicap" (Lamont & Lareau, 1988). Jaeger (2009) has asserted that three conditions are necessary for cultural capital to promote educational success. First, parents and educators must possess high status cultural capital. Next, parents and educators must transfer high status cultural capital to students. Finally, students must absorb high status cultural capital and convert it into educational success.

Summary of Literature

Cultural capital and higher education. McDonough, Antonio, and Trent (1997) recognize that the cultural capital advantageous to a college-bound student is knowing what college is, understanding the diversity of institutions, being able to complete the application process, appreciating the graduation rates of various types of institutions, and being able to understand the future conversion capacity of the different degrees available. The type of cultural capital one possesses varies significantly among different student populations, influencing the type of institution students will choose to ultimately enroll in college and even whether or not students will choose to further their education or career preparation at all.

McDonough (1997) asserted that social, cultural, and organizational context affect college choice among students. In general, difficulty in college access persists for students who are first-generation, of low SES, from rural areas, or of color (McDonough, McClafferty, & Fann, 2002). However, it is important to note that there is vast diversity within minority groups Immerwhar (2003), in an attempt to better understand the gap that exists between the high educational expectations of Hispanic parents for their children and the low educational achievement of Hispanic students, found that there was not a unified set of characteristics or

attitudes that defined the group. Instead, similar attributes within the "Hispanic" sample were identified according to three separate units: college-prep students, non-college-bound students, and the college-maybes. The three groups of Hispanic individuals demonstrated more similarities when arranged by social class, analogous to Bourdieu's beliefs. Similarly, clear-cut differences among various Asian American groups (e.g., regarding college choice) were found by Teranishi, Ceja, Antonio, Allen, and McDonough (2004). Asian American students' cultural capital also varies greatly among subpopulations in this ethnic group. For example, Chinese Americans, regardless of socioeconomic status or language barriers, are very successful academically and matriculate to postsecondary institutions. This is attributed to the high value that Chinese families place on education (Teranishi et al.). Southeast Asians and Filipinos, regardless of socioeconomic status, are more likely to choose a college closer to home (Teranishi et al.).

DiMaggio (1982) suggested that returns on cultural capital can be greatest for students who are least advantaged. Over time, status groups, once well-defined and precisely demarcated, are now less concentrated and more loosely connected in modern society. Thus, as the requirements for affiliation with a high status group become less identifiable to any lone member, the significance of a shared status culture—for which cultural cues define an individual as a member to other members—becomes greater (DiMaggio, 1982). In general, people may have a range of status cultures that they employ in certain situations during daily interaction. So, instead of being a member of a status group, individuals engage in status culture participation. In this sense, DiMaggio (1982) considered status as a process rather than as a function of individual attributes. Within this idea, someone's familial background may only be a partial determinant of his or her accumulation of cultural capital. Low status students who seek upward mobility may be able to achieve it through active participation in high-status cultures.

Though all SES groups have distinct types of cultural capital, the group with the type of cultural capital deemed most valuable cultural capital is the dominant class. Hence, students from the dominant class possess what is considered the most advantageous, high-status cultural capital (Walpole, 2007a). Those students who are not part of the dominant class are assumed to possess low-status cultural capital. Students from a high SES background are continuously rewarded for having what is recognized almost singularly as high-status cultural capital, causing those from low SES backgrounds who possess low-status cultural capital to be prone to achieving less success in educational systems. Institutions of higher education are the vehicle through which students can obtain educational credentials, academic capital, or additional cultural, social, or economic capital. Students accumulate additional capital while in college, which can be "reinvested" for future educational and career attainment, as in the decision to enroll in advanced degree programs (Walpole, 2003).

Influence of cultural and social capital on undergraduate enrollment. Several studies have explored the influence of cultural and social capital on college enrollment among undergraduate students (Perna, 2000; Perna & Titus, 2005; Rowan-Kenyon, 2007). All have used data generated from follow-up surveys of the National Educational Longitudinal Study (NELS) Database, using different variables related to a traditional econometric approach (financial resources, cost, financial aid, and tuition) coupled with factors related to cultural and social capital.

Perna (2000) found that among Whites, African Americans, and Hispanics, the inclusion of variables measuring social and cultural capital improved the fit of the econometric model. For White students, academic ability was most influential in predicting college enrollment, followed by social and cultural capital, costs and benefits, then financial resources. Among African

American and Hispanic students, academic ability was just as important as the influence of social and cultural capital. The lower college enrollment rate of Hispanic students as compared to that of Whites and African Americans was due to restrictions in this group's access to the types of capital needed to facilitate college enrollment.

Some forms of parental involvement increase the likelihood of college enrollment (Perna & Titus, 2005). Potential for enrollment increases as parents increase discussion of education-related topics, as parental contacts to the school to volunteer increase, and as parents increasingly contact the school about academic issues. Rowan-Kenyon (2007), in exploring delayed enrollment in college, found that timing of college enrollment varied based on race/ethnicity, gender, and SES. Of the all of the groups studied, high school graduates who were Black comprised a higher percentage of those students who delayed enrollment. With regard to gender, males were more likely to delay enrollment (54%) or not to enroll (60%). Graduates who enrolled immediately after high school had a higher SES background than those individuals who delayed college enrollment or did not enroll in college at all (Rowen-Kenyon, 2007).

While financial resources did not seem to influence delayed enrollment in the 2007 study, high school graduates with lower achievement scores tended to delay enrollment or chose not to enroll in college at all. It was concluded that SES, academic achievement, and preparation were important predictors of enrollment timing after controlling for background, and social and cultural capital (Rowan-Kenyon, 2007). Positive predictors of immediate enrollment also included level of math completed, parental involvement, high school support, mothers' educational expectations, and peer encouragement. Finally, SES was very influential in predicting immediate and delayed enrollment versus non-enrollment, even when controlling for all other variables (Rowan-Kenyon, 2007). Thus, as SES increased, there was a greater

likelihood that a high school graduate would immediately enroll in college or delay enrollment, rather than not enroll in college at all.

Influence of cultural and social capital on graduate enrollment. Three studies have addressed the influence of cultural and social capital among those individuals who decide to attend graduate school. A study by Perna (2004) attempted to build on the theoretical framework established within undergraduate enrollment trends, applying this framework to understanding gender and ethnic group differences in post-baccalaureate enrollment and the influence of cultural and social capital. As in her study of students pursuing undergraduate degrees in 2000, Perna (2004) found that adding variables relevant to cultural and social capital to traditional econometric framework measures enhanced the explanatory power of a model of graduate school enrollment. Results of data analysis in Perna's study (2004) indicated that enrollment patterns for post-baccalaureate education differ according to gender. Perna (2004) concluded that more women than men tend to enroll in submaster's and master's degree programs, while men are more likely than women to pursue first-professional and doctoral degrees. With respect to race/ethnicity, Asians had the highest incidence of enrollment in graduate programs.

Comparable shares of Blacks and Whites pursued degrees in submaster's, masters and first-professional programs (Perna, 2004). However, in taking expected costs and benefits, financial and academic resources, and social and cultural capital measures into account, Perna (2004) found that Blacks are more likely to enroll in post-baccalaureate programs than Whites. In addition, Black women are more likely than Black men to enroll in graduate programs. While Perna's findings (2004) were congruent with earlier research (Catsiapis, 1987; Kane & Spizman, 1994; Perna, 2000), it is also important to note that only a small percentage of Black females

were similar to White females in regard to the other variables included in the model. Thus, this finding should be taken with caution (Perna, 2004).

Walpole (2003) explored the differences in college activities among students from low and high SES backgrounds and compared salary levels, educational attainment, and advanced degree expectations of college graduates from a low versus high SES backgrounds. Using a Bourdieuian framework (Bourdieu & Passeron, 1977; Lamont & Lareau, 1988), Walpole (2003) found that SES continues to affect students' college experiences and outcomes. This supports Walpole's conclusion that those students from low SES backgrounds have different cultural capital from those from high SES backgrounds, and this is not necessarily changed by college attendance.

Additionally, low SES seems to be a greater factor in graduate school enrollment and degree attainment than race/ethnicity (Walpole, 2007b). Similar to her 2003 study, Walpole (2007b) found that social class was a primary predictor of capital accumulation, conversion, and reinvestment among African-American students.

Significance

Theoretical significance. Bourdieu's concepts of cultural and social capital were based on how dominant groups guaranteed that their children would maintain their class status. In order to preserve their control, more dominant groups may minimize or destroy minority culture through cultural alienation and annihilation (Freeman, 2006). Some examples of this reduction or eradication of culture occurred as a part of our nation's history among American Indians and Blacks, where individuals from these groups were forced to integrate among the dominant White culture. The most significant area in which this cultural alienation and annihilation exists is in education. One example of cultural alienation and annihilation is via the transmission of

education (Freeman, 2006). The social and cultural capital of Black individuals has been disregarded and Black culture has been dismissed through teaching methods (transmission of education) and curriculum. Thus, the accentuation of White culture through who teaches, what is taught, and how it is taught has rigorously eroded Black cultural identity and educational experiences (Freeman, 2006). Further, this phenomenon has led to a culture of exclusion for minority groups in education.

Human potential is defined as an individual or group's talent, which includes knowledge, skills, or disposition (Freeman, 2004). Thus, the underutilization of human potential means that one's talent (what constitutes worth) has been too narrowly identified, the mismatching of skills with duties has occurred (underemployment), or the complete lack of use of an individual's talent has resulted in not realizing one's full potential (unemployment) (Freeman, 2004). Underutilization of human potential may occur through such instances as discrimination, inequitable educational opportunities amid individuals or groups, incongruous training for the job market, or discord in the delivery of technological knowledge (Freeman, 2006). The ability to understand the underutilization of human potential is vital because it helps us comprehend the educational inequality, underemployment, unemployment, and roles of non-majority groups, as well as the financial discord between the "haves" and the "have-nots" (Freeman, 2006).

Practical significance. There are both monetary and nonmonetary costs to individuals and society due to the underutilization of Blacks' human potential (Freeman, 2006). Monetary costs are much more visible than nonmonetary ones, and include material wealth (among individuals) and decreased productivity and diminished tax revenue due to underemployment and unemployment (within society). However, the nonmonetary costs of the underutilization of Blacks' human potential are less discernible and are generally seen over time (Freeman, 2006).

Societal nonmonetary costs result from the incongruity of skill levels among members of the Black population, consisting of the intergenerational effect, increased crime, and the diminished ability to adapt to lifelong learning and to utilize technology (Freeman, 2004). The concept of intergenerational effect is related to the value that is placed on education within a family that is transmitted to children from their parents across generations (i.e., cultural capital). Therefore, because many generations of Black individuals have not been the recipients of education, Black parents may not be able to successfully transmit the value of education to their children. This impaired transmission, in turn, is likely to affect the education of future generations (Freeman, 2006). Thus begins a very difficult and costly cycle to break.

Nonmonetary costs of the underutilization of human potential to individuals are related to aspiration and motivation and the "stereotype threat" (Freeman, 2006). In response to intergenerational effect in which the Black population was excluded from equitable educational opportunities, Freeman, in her 1997 study, found that Black students may simply choose not to attend college due to a loss of hope. In addition, negative experiences at school may lead to students' decreased aspiration and motivation to continue education at increasingly higher levels. Again, this is a perpetuated cycle that will ultimately lead to underemployment and unemployment as individuals do not have the necessary skills for the job market. Next, stereotype threat is one's concern over being looked at from a negative perspective or one's trepidation in acting in a manner that would confirm a negative stereotype (Freeman, 2006). However, the most detrimental nonmonetary cost to an individual whose potential is underutilized is the impact on his or her self-esteem and confidence.

Conversely, there are many benefits, both to the individual and to society as a whole, associated with the attainment of an advanced degree (Nevill & Chen, 2007). An individual with

a graduate degree can realize personal and intellectual gains, as well as greater professional opportunities and financial success. For society, a more highly skilled, well-educated workforce yields more successful economic and technological advancement (Nevill & Chen, 2007). Though diversity has increased within the undergraduate population, students from minority groups continue to be underrepresented in the achievement of graduate degrees (Perna, 2004). Although research considers cultural and social capital as important variables in college choice, more emphasis is placed on grouping and summarizing results according to individuals' gender and race/ethnicity.

According to Walpole (2003), institutions of higher learning are the vehicles by which students acquire academic credentials and capital. Students may also obtain additional cultural, social, or economic capital while in college, which can be used for its conversion potential. In this context, students make educational decisions in order to accumulate capital that can be converted at a later date in further pursuit of educational and professional gains (Walpole, 2003).

The current study is important to the field of higher education because it is likely to yield a greater understanding of the types of cultural and social capital used for conversion by bachelor's degree recipients in the decision to attend and complete graduate school. According to Walpole (2007b), what is less understood and has been less explored are the college experiences and outcomes of students from minority groups who do graduate from college (Walpole, 2007b). Through studying the successful use of conversion strategies, policies and programming can be developed to support non-majority students during their high school and undergraduate years, leading to increased educational attainment, educational aspirations, and graduate school attendance and completion.

Though there is a gap between when the data were collected in 2003 and its analysis in the proposed study, there is evidence via more recent research (as provided in Chapter 2: Literature Review) that not much has changed in how cultural and social capital are defined and which variables have been used to measure these two concepts. What has changed and has begun to evolve is critical race theory (Yosso, 2005). Critical race theory proposes the existence of different yet equally valuable capital attained by individuals from non-majority groups that can increase community cultural wealth. However, Bourdieu's ideas about social reproduction have existed and been studied for over three decades, and still have the potential to explain inequalities in education (Winkle-Wagner, 2010). Though there is increasing diversity among racial and ethnic groups within the U.S. population, those students displaying high-status cultural signs continue to be rewarded in schools and in post-secondary institutions. As a theoretical framework and an analytical tool, Bourdieu's work is still very relevant in identifying valued currency in the educational setting and how it can be obtained. This is especially important in considering those EEC students identified by Walpole (2007a) and in viewing SES as an essential part of cultural and social capital influence (Walpole, 2003, 2007b).

The review of the literature for the proposed study also yields a gap in the literature in determining the influence of cultural capital and social capital among graduate students. While there are multiple studies that explore the influence of cultural and social capital among undergraduate students (Pearce & Lin, 2005; Perna, 2000; Perna & Titus, 2005; Rowan-Kenyon, 2007), similar research conducted with graduate students is limited. Morrison, Matuszek, and Self (2010), Rand and Wilensky (2006), and Darley (2000) have successfully argued the importance of replication studies outside of the natural sciences. According to Heffner (2004), "replication is important for a number of reasons, including (1) assurance that results are valid

and reliable; (2) determination of generalizability or the role of extraneous variables; (3) application of results to real world situations; and (4) inspiration of new research combining previous findings from related studies" (¶ 2).

Because there are too many differences between the current study and Perna's (2004) work, it cannot be considered a replication. However, the current study functions as an extension of Perna's earlier work (2004). Similar to Perna's (2004) study, the current study examined which variables related to cultural capital and social capital increased the likelihood that an individual made the decision to attend graduate school. However, the current study analyzed data generated from a more recent follow-up of the *Baccalaureate and Beyond: 93/03* survey than Perna's (2004) use of the *Baccalaureate and Beyond: 93/97* survey of the same participants. The research questions and design of the current study have the potential to yield findings to support Perna's (2004) earlier work and to add significant information to the higher education field's body of knowledge on the influence of cultural and social capital in graduate school choice.

Implications

There are several implications for the proposed research study. First, the findings of this study might help educators become more aware of the norms and expectations relevant to certain types of cultural and social capital at their institutions. Second, it is important to start directing research into the areas that we can change, such as developing strategies to increase the enrollment of students of non-majority groups in college and in graduate school, versus the factors we cannot change (e.g., gender, race/ethnicity, and SES). Third, additional studies, such as this one, can help determine the need and direction for future research on Bourdieu's Theory of Social Reproduction. Fourth, the present study can provide evidence as to whether the same

phenomenon exists among student choice in graduate school as demonstrated in the undergraduate population, or whether a different conceptual framework should be considered.

Practical implications. First, from a practical perspective, this study's findings can aid educators in becoming more attentive to the beliefs and values related to cultural and social capital at their schools. It is important to understand how and why we reward students whose behaviors and dispositions reflect a certain habitus and taste, and why we find other students' habitus and taste less appropriate for the educational setting. If we, as educational practitioners, have the ability to influence cultural and social capital, then we should be aware of how to do so in a positive way and how to make sure that those students without certain resources have or gain access to what they need in order to improve their ability to be successful in college degree attainment and matriculation to/completion of graduate programs.

Limited research has been performed on the influence of cultural and social capital on *graduate* enrollment. More studies, however, have been performed at the undergraduate level. Results have provided important findings related to college choice decisions among groups according to gender and race/ethnicity. Perna (2000) found that measures of social and cultural capital improved the explanatory power of the traditional econometric model in determining predictors of college enrollment. This research study attempted to use cultural capital and social capital variables as the primary focus among all groups. Although earlier studies have been important in determining strategies to increase the enrollment of students of non-majority groups in college and in graduate school, the second implication of this study is that it is important to start directing research in establishing information in the areas the we can change, and not the things we cannot (e.g., gender, race/ethnicity, and SES),

Theoretical implications. From a theoretical perspective, this study aimed to establish the influence of cultural capital and social capital on the decision to matriculate to graduate school. Many studies have been performed on the influence of cultural and social capital on college choice in the undergraduate population (Freeman, 1997; Pearce & Lin, 2005; Perna, 2000; Perna & Titus, 2005; Rowan-Kenyon, 2007), which led to Perna's development of a conceptual model that could be used to examine college choice, determining whether or not a student will make the decision to attend college and which type of college the student will choose to attend (2006). Because similar studies have occurred at the undergraduate level, this research can provide evidence that the same phenomenon exists among student choice in graduate school attendance, or whether a different conceptual framework should be considered.

Chapter Two

Literature Review

Introduction

This chapter will present a review of the literature associated with the key variables in this study. It will begin by describing the history and evolution of research on college choice and access. It will then include a discussion of more contemporary research on college choice and access, including theoretical frameworks, research methodology (qualitative and mixed), and among students with the most challenges (i.e., first-generation, EEC, and those from non-majority groups). Next, the influence of cultural and social capital will be explored among undergraduates. The literature review will also include a discussion of other types of capital influencing college choice, such as those associated with oppositional and complementary culture and critical race theory. This will be followed by a discussion of the influence of cultural and social capital among graduate students. Finally, research related to the influence of SES and cultural and social capital will be presented.

The literature review will provide the rationale for the current study's research questions:

1. Which variables relevant to cultural capital (i.e., parental educational attainment, whether English is the most frequently spoken language in the home) increase the likelihood that an individual will decide to attend and complete graduate school?
2. Which variables relevant to social capital (parental financial support for undergraduate education, existence of social networks through Carnegie classification and tuition, and peer networks determined by location of the university) increase the likelihood that an individual will decide to attend and complete graduate school?
3. What are the graduate school enrollment and completion patterns of individuals by gender?

4. What are the graduate school enrollment and completion patterns of individuals according to race/ethnicity?
5. What are the graduate school enrollment and completion patterns of individuals from high SES and low SES backgrounds?
6. How do variables relevant to cultural capital influence graduate degree attainment among individuals from high SES and low SES backgrounds?
7. How do variables relevant to social capital influence graduate degree attainment among individuals from high SES and low SES backgrounds?

Early Research on College Choice and Access

According to Perna (2006), early research in college access and choice, occurring in the 1960s to 1990, focused on an economic model of human capital investment and a sociological model of status attainment, utilized quantitative methodology, and did not focus on more narrowly defined groups (i.e., African Americans, Hispanics, Asian Americans, or EEC students). Hossler, Braxton, and Coopersmith (1989) and Paulsen (1990) completed extensive literature reviews on college access and choice. Hossler et al. (1989) examined research considering a variety of variables influencing student college choice (such as ability/achievement, parental education level, parental encouragement, ethnicity, gender, SES, etc.) within the context of Hossler and Gallagher's (1987) three-stage model: predisposition, search, and choice. Paulsen (1990) reviewed macro-level studies (at the national, state, and institutional level) and micro-level studies (related to individual student characteristics) also in the context of the three-stage model.

In response to the increased interest in student college choice behavior due to the increased financial aid availability by the federal government, the decreased number of high

school graduates, and the decreased participation of minority graduates (especially Black students), Hossler et al. (1989) performed a review of three decades of literature on this topic and explored the different perspectives on college choice, which included econometric, sociological, and combined models. Although econometric studies are also done to predict college enrollment at the institutional, state, and national level, this review concentrated on that of the individual student. Hossler at al. (1989) discovered that the student first considers the benefits and disadvantages of college versus non-college choice (college-going models). The factors considered by students included such things as expected costs (tuition, financial aid, room and board, and living expenses), foregone earnings due to college attendance, future earnings, high school attributes (number of students pursuing post-high school education and high school quality), and college attributes (admissions standards, ability of students attending that college, cost, degree offerings, and campus life) (Hossler et al., 1989).

According to Hossler et al. (1989), after the student considers the benefits and disadvantages of attending college and makes the decision to go to college, the student then makes a choice among colleges to attend. The researchers found that factors in this decision-making process consisted of costs (out of pocket expenses, tuition, availability of financial aid, and ratio of costs to family income), parental income, student academic ability, and college attributes (admission selectivity, average student ability, size/graduate orientation, masculinity/technical orientation, ruralness, fine arts orientation, and liberalness). Last, the research suggested that students utilize a consumer model of choice by weighing costs and risks as principal factors (Hossler et al., 1989).

The sociological models of college choice included the discovery and relationship of factors that affect one's aspirations for college attendance (Hossler et al., 1989). Important

factors in these models included family SES, student academic ability, encouragement of parents and significant others, gender, and high school academic performance. Further, the combined models of college choice, which evolved from the first two models, centered on student perception of college choice and the impact of institutional attributes on college choice (Hossler et al., 1989).

After reviewing the three perspectives related to college choice, Hossler et al. (1989) performed an extensive review of the literature on college choice, organizing it based on the three stages of college choice: predisposition, search, and choice (Hossler & Gallagher, 1987). The predisposition stage is characterized by the time during which students decide whether or not they will continue their formal education after graduating from high school. In the predisposition stage, race and ethnicity play a role, as Whites and Asians are more likely to attend college, and Black and Hispanic students are less likely to do so. Previous studies argued the role of gender during the predisposition stage, but this has been precluded by increased college enrollment rates of females (Hossler et al., 1989). Finally, in regard to family residence location, students living in urban areas were more likely to attend college than those in rural areas, but close proximity to an institution also increased enrollment (Hossler et al., 1989).

According to Hossler et al. (1989), the literature on the search stage is very limited. The most important issues in this stage are timing, information sources, and limits on the search process. By the time students reach their junior year in high school, from a timing perspective, they have concluded the predisposition stage and have entered the search process and have developed a potential list of postsecondary institutions they are considering attending. Most students have entered the choice stage by the end of their junior year or the beginning of their senior year (Hossler et al., 1989).

The next primary characteristic explored in the search phase is related to information sources. When students began the search phase, they required a significant amount of information on their chosen institutions. The most common sources of information pursued by students included university catalogs, campus visits, guidance counselors, students already in college, and admission officers (Hossler et al., 1989). In addition, students were most interested in the quality of the school, the cost, program availability, financial aid availability, helpfulness, and instructor quality.

Last, within the choice stage, the primary variables influencing student choice were individual student characteristics, nonfinancial institutional attributes, and financial institutional factors (Hossler et al., 1989). There was a strong correlation between student college choice and student ability, related to the influence of selective institutions, parental encouragement, and SES. Moderately influential student factors consisted of ethnicity, as Blacks were less likely to attend college, and parental education (Hossler et al., 1989). Students most often considered academic quality, location, and availability of financial aid in selecting a postsecondary institution. However, in consideration of financial variables, individuals were more likely to consider net cost and less so to make a decision based on receipt of aid (Hossler et al., 1989).

Hossler et al. (1989) suggested that further discovery in college choice behavior focus on theory development and additional research in the three stages of college choice. In the area of theory development, the researchers proposed that it be determined how the many variables interact within combined models and that theories about college choice are developed in each of the three stages. Future research should be directed at how ethnicity influences predisposition in both majority and minority groups. In addition, more research should be directed at the search stage. Within the choice stage, Hossler et al. (1989) recommended more attention be paid in the

area of institutional image. This had been done at individual schools, but not in multiple ones to determine how students assess and make decisions about these factors.

Paulsen (1990) reviewed the results of 25 years of college choice behavior research. In the 1970s, research on college access and choice was focused on understanding student enrollment behavior in the context of the changing higher education marketplace. At the time, colleges and universities were faced with decreasing enrollment, and felt the need to become more in tune to the concept of students as consumers, responding to the increasing competition among higher education institutions. Paulsen's review (1990) focused on research studies within the following categories: macro-level studies (enrollment demand and environmental, institutional, and student characteristics), micro-level studies (individual student enrollment behavior and environmental, institutional, and student characteristics), and the different stages of college choice.

The macro-level research studies reviewed by Paulsen (1990) were performed at the national, state, and institutional level. At the time, college choice behavior centered primarily on enrollment and the existing job market and focused on college versus non-college attendance. If jobs and income for non-college graduates increased, then the likelihood that an individual would attend college decreased. If the economy moved into a recession, then job opportunities for non-college graduates decreased, and college enrollment increased. Thus, many students made college attendance decisions based on an econometric perspective, weighing potential monetary costs and benefits with the possibility of foregoing earnings (Paulsen, 1990).

Micro-level studies reviewed by Paulsen (1990) focused on the preferences of individual students choosing a college versus a non-college option. This research considered student characteristics, institutional qualities, and the relationship between the two. The student

characteristics explored in the studies included race (White versus Black or nonwhite), marital status, family income, parental educational attainment, paternal occupational status, parental encouragement, self-educational or occupational aspirations, academic aptitude, academic achievement, high school curriculum, and peer college attendance. Institutional characteristics studied were tuition costs, financial aid availability, costs of room and board, distance from home, admissions selectivity, and degree offerings. Finally, it was found that the interaction of the two (student and institutional attributes) yielded the following (Paulsen, 1990): the likelihood of attending college increases with lower tuition, room and board, and distance from home, the likelihood of college increases with greater availability of financial aid (especially scholarships), and a measure of quality of an institution for students is the selectivity of its admissions.

In exploring models of college choice, Paulsen (1990) used the three-stage model based on the work of Hossler and Gallagher (1987), consisting of college aspiration formation (Hossler's first stage: predisposition), college search and application (Hossler's second stage: search), and college selection and attendance (Hossler's third stage: choice). Results of research on college aspiration and formation indicated that there are three types of factors that will ultimately encourage or discourage one from developing college aspirations: student and family background (race, parental marital status, family size, educational attainment of the student's father and mother, father's occupational status, family income, parental encouragement, and student self-esteem), academic ability (student's aptitude and achievement), and high school and neighborhood context (college plans of peers, SES of student's neighborhood, SES and academic status of student's high school, student's disciplinary problems in high school, student's attitude toward school and success, college preparatory curriculum at student's high school, teacher and counselor encouragement to attend college, and the economic benefits of attending college).

However, parental encouragement had the greatest influence of all other factors on all students at this first stage. Further, when exploring this first stage in the contexts of race/ethnicity, Black students were more responsive to influences such as achievement in school, parental, teacher, and peer encouragement, and self-esteem (Paulsen, 1990).

During the search and application phase, patterns of student choice behavior vary considerably based on such factors as student characteristics, institutional attributes, and information sources (Paulsen, 1990). Differences in the timing and the nature of the information sought within this stage are influenced by the race, gender, and aptitude of the student. For instance, Black students generally request additional information, consult more sources of information, contemplate a greater number of institutions, and consider more institutional attributes than students who are White. Females begin and complete this phase earlier than males, as well as generate a greater number of college applications (Paulsen, 1990).

Preferred institutional characteristics also vary widely according to student attributes, including gender, race, ethnicity, parental educational level, family income, parental preferences (cost, location, and quality), religion, and academic ability (Paulsen, 1990). Finally, the exploration of information sources during the search and application phase yielded important information for effective institutional student marketing and recruitment. Both students and their parents assume consumer roles in the college choice process. Preferred sources of information about college for both groups included admissions officers, admissions and marketing publications, high school counselors, alumni, and current college students (Paulsen, 1990). One striking difference among students was related to race, with students who are Black and White preferring very different information sources. Black students tend to utilize a greater array of information resources than do White students. In addition, Black students gather a greater

amount of information about a college directly - via campus visits or meetings with admissions staff, while White students rely on information from high school counselors or parents (Paulsen, 1990).

Paulsen (1990) found that the process of selection and attendance is most heavily influenced by SES and academic ability, with greatest consideration given to college attributes such as cost of attendance, financial aid availability, degree program availability, size, location, quality, social atmosphere, athletics, and religious emphasis. Research in this area was most typically performed at individual colleges and universities, by examining the preferences of admitted applicants. Ultimately, an institution must actively and successfully recruit students that match its attributes, or the institution must adjust its attributes in order to attract the students it most wants to admit (Paulsen, 1990).

It is interesting to note both the prioritized areas studied during this time frame and the recommendations made by Paulsen (1990) for future research and policy. First, he identified that further research should explore the college choice behavior of nontraditional students and students from nontraditional groups (i.e., females, minorities, foreign students, and other groups). Since Paulsen's 1990 work, many studies have been published that explore the college choice behaviors of students from nontraditional groups (McDonough, 1997; Pearce & Lin, 2005; Perna, 2000, 2004; Perna & Titus, 2005; Rowan-Kenyon, 2007; Walpole, 2003, 2007b). Second, he suggested that models be developed in predicting how students select graduate schools (Paulsen, 1990). Other recommendations included learning more about the college search process, the development of databases to answer further questions (national longitudinal studies), creation of institutional research offices at all campuses, and utilization of government and private resources in conducting research (Paulsen, 1990). As will be demonstrated by this

literature review, most of Paulsen's ideas as well as those of Hossler et al. (1989) have come to fruition in more current research. The findings of Paulsen (1990) and Hossler et al. (1989) are integral to the current study, as the study includes patterns of graduate school enrollment among majority and non-majority groups, a model about college choice developed by Perna in 2006, and the use data from a longitudinal study (*Baccalaureate & Beyond: 93/03*).

Contemporary Research on College Choice and Access

In the years since the publication of the works of Hossler et al. (1989) and Paulsen (1990), college access and choice research has taken different directions. In addition to considering both econometric and sociological perspectives, additional frameworks are considered in order to further enhance this research (Perna, 2006; Bourdieu & Passeron, 1977; Horvat, 2003; Winkle-Wagner, 2010). Further, qualitative and mixed research methodology are being employed to enhance the understanding of student college choice (e. g., Perna, 2006; McDonough, 1997; Freeman, 1999; Hossler, Schmit, & Vesper, 1999). Finally, scholars have begun to focus their research on student groups whose path to college has been found to be the most riddled with challenges, including those who are first-generation college-goers or students of color (i.e., African Americans, Hispanics, and Asian Americans), or who originate from rural areas, or from families of low income or SES (Perna, 2000, 2004, 2006; McDonough, McClafferty, & Fann, 2002; Perna & Titus, 2005; Pearce & Lin, 2005; Rowan-Kenyon, 2007).

More current research has centered on the many variables that influence college choice of individual students and groups and considers additional theoretical frameworks in conducting this research. From a traditional econometric perspective, students make educational choices by weighing costs against benefits (both monetary and nonmonetary) for all options and by then

selecting the best alternative according to their own individual preferences and opportunities (Perna, 2004).

Bourdieu's Theory of Social Reproduction. Horvat (2003) argues that most researchers have oversimplified Bourdieu's ideas related to cultural and social capital. Winkle-Wagner (2010) also suggests that the ability to understand cultural and social capital must occur within the holistic context of Bourdieu's Theory of Social Reproduction. Winkle-Wagner argues that in order to truly understand the role cultural and social capital play in educational research, Bourdieu's central theoretical construct, habitus, must be understood and employed.

Habitus is the frame for the perception of one's cumulative cultural capital (Winkle-Wagner, 2010). The development of habitus occurs as a result of every aspect of one's social condition, including race, ethnicity, geographical location, and gender. The structure of one's habitus commences in early childhood - but continues to develop through adulthood as an individual unconsciously integrates the conventions of the environment in which he or she lives and his or her place within it (Winkle-Wagner, 2010). Basically, one's habitus allows for the understanding of an individual's attitudes or decisions (Horvat, 2003). Thus, exploration of cultural and social capital, with a greater emphasis on habitus, can provide a more detailed lens in terms of how race and class influence students' lives and their educational experiences. The data analyses conducted in this study, via logistic regression, were used to determine key differences not only among groups related to gender, race/ethnicity, and SES, but also within them.

According to Horvat (2003), Bourdieu's concept of capital is fundamentally a form of power in any given field that can be transformed or converted. Thus, cultural capital is a resource, such as high status knowledge about art or music or mannerisms and practices that

have high status values and educational credentials that can advance access to power for the individuals who possess it (Horvat, 2003). Bourdieu has defined three types of cultural capital: embodied, objectified, and institutionalized. Embodied cultural capital includes those long-standing beliefs of the mind and body, while objectified cultural capital consists of cultural goods, such as books, instruments, or machines. Institutionalized cultural capital consists of academic qualifications or credentials (Horvat). Social capital, on the other hand, is the "set of valuable connections or networks of a given individual" (Horvat, p. 8).

Also important to the understanding of Bourdieu's capital is the idea of field, which comprises the "rules of the game" (Horvat, 2003, p. 8). Field "is the space in which cultural competence, or knowledge of particular tastes, dispositions, norms, is both produced and given a price" (Winkle-Wagner, 2010, P.7). Thus, different forms of capital have varying values, and this value is dependent on how significance is assigned in a given field of interaction. Thus, one must understand the concept of habitus, always attending to how one's own dispositions (i.e., beliefs, educational credentials, mannerisms, and tastes, and how each is valued and by whom) contribute to the big picture in any context.

McDonough (1997), like Bourdieu, realized the importance of the inclusion of habitus in her research. McDonough describes habitus as "a common set of subjective perceptions held by all members of the same group or class that shapes an individual's expectations, attitudes, and aspirations" (1997, p. 9). These beliefs may not be rational but are gained by individuals through observing others who are like them to determine what is appropriate or good in formulating their own aspirations. Thus, students develop their own sense of entitlement, deeming that they are entitled to a certain form of college education based on family habitus or class status (McDonough, 1997).

In order to further explain Bourdieu's theory, Winkle-Wagner used the metaphor of a card game (2010). Within this game, cultural capital "affects the cards one holds in the game" (Winkle-Wagner, 2010, p. 6). During the game, certain cards are dealt just to the player (as cultural capital is obtained through a person's family), while others are specifically requested or traded (obtained through an active process, like schooling), as in a poker game. Cards are recognized as valuable only during a certain game or round (a specific context, as in the concept of field). For example, a pair of aces might be part of the winning hand in one instance, but not when another player has three aces during another round. Habitus provides the perspective one has while playing the game, such as determining what one's odds may be in the game and if folding is the right decision. If one's possession of cultural capital allows for special treatment from the dealer, then one's habitus may increase or decrease that person's odds for winning the game. If a player is given a different card (such as an Uno card while playing poker), then that individual is unable to even compete in that game (Winkle-Wagner, 2010).

The concepts of cultural capital and habitus inside a specific context (field) explain the method by which "societal structures and opportunities combine with individual aspirations to reproduce the existing social structure" (Walpole, 2007b, p.240). Simply, each social group or class has its own forms of capital (i.e., economic, cultural, social) that parents transfer to their children in the form of values, beliefs, or conduct. Children use these forms of capital as investments for social advancement (Lamont & Lareau, 1988). Within this belief system, education is utilized for its conversion potential (Walpole, 2007b). According to Bourdieu and Passeron (1977) and McDonough (1997), the most economically and symbolically valued cultural capital is held by the dominant class of a culture (Perna, 2000). Individuals who are not part of the dominant culture and do not possess the required cultural capital may:

> (a) lower their educational aspirations or self-select out of a particular situation (e.g., not enroll in higher education) because they do not know the particular cultural norms; (b) over perform to compensate for their less-valued cultural resources; or (c) receive fewer rewards for their educational investment (Perna, 2000, p.119).

Qualitative/mixed methodology in college choice research. More recently, several researchers (McDonough, 1997; Freeman, 1997; Hossler, Schmit, & Vesper, 1999) have explored college choice via qualitative or mixed methodology. Overall, the qualitative data were able to enhance the studies' findings and give a voice to traditionally underrepresented groups of students (Perna, 2006). McDonough (1997) completed case studies of the college choice processes of 12 subjects, explored the organizational context in which these choices were shaped, and presented a cross-case analysis of the high schools the subjects attended. In order to control for gender and race, McDonough (1997) interviewed only females who were White. This group represented the most common population of college enrollees at the time the study was conducted. Choosing schools with individuals from both high and low SES backgrounds, the study also considered the cultural capital of students. The students' habitus was explored by the interviewing of a parent, best friend, and guidance counselor for each of the participants. Participants also varied in that they represented schools that had both weak and strong guidance counseling support services (McDonough, 1997).

In considering the qualitative methodology used in McDonough's study (1997), there were many variations in determining college choice patterns among the respondents. However, it was found that "students make college choice in the context of implicit and explicit messages from their social and organizational networks" (McDonough, 1997, p. 149). Choices are made based on what family and school resources are available, which are based on race, class, SES,

and the student's overall individual context. Thus, students do not always approach college choice in the rational manner likely to be used by economists or policy makers. McDonough (1997) also found the following regarding cultural capital:

> [It] confers needed advantages in making the transitions between social institutions by further advantaging those students who have and use family, financial, and network capital to supplement their organizational habitus in trying to maximize their educational choices and return on investment (McDonough, 1997, p. 151).

Further, the study found that both students' families and schools are very important to individual student choices (McDonough, 1997). In addition, the student's own values are important in influencing college choice. Decisions are made as one looks through a contextual lens that reflects one's academic achievement, economic circumstances, field of vision, and values. Students then make decisions about college based on all of the above-mentioned factors, as well as the extent to which they feel a college is realistically within their grasp. Finally, McDonough (1997) found that even though individuals develop their own aspirations, students with similar academic achievement and from like social class backgrounds make very similar college choices.

Like McDonough (1997), Freeman (1997) used a qualitative approach to explore barriers African Americans face in deciding to participate in higher education and the solutions the participants in the study recommended to help increase African Americans' participation in higher education. Freeman thought it was necessary to utilize qualitative methodology, as she felt that students, especially those from disempowered groups, rarely had their voices heard in issues affecting their lives. Structured group interviews were utilized based on a pilot study of an inner city school and a private school in Atlanta, Georgia. Data were collected via five focus

groups in Atlanta, Chicago, Los Angeles, New York, and Washington, D.C. These cities were chosen because they were found to have the largest cross-section of African Americans (Freeman, 1997). Overall, 70 students were interviewed in 16 group sessions.

In Freeman's exploration of the perception of barriers to African Americans' participation in college, several themes emerged following data analysis (1997). These included economic/financial barriers and psychological/social barriers. Students expressed the fear of not having adequate funds to pay for college or not successfully obtaining a job that would be appropriate to the level of education attained following college attendance. Psychological and social factors included the belief that college would not be an option, the loss of hope, and the "intimidation factor" (Freeman, 1997, p. 535). Participants in the study expressed that if an individual attended a high school that was predominately Black, going to college was intimidating because many more students there (at the college) were White and had the benefit of either going to a private school or had the benefit of a "White" education (Freeman, 1997).

The students offered many solutions in how to increase African American students' participation in higher education (Freeman, 1997). Emerging themes included improving school conditions, such as the equipment the school has, who teaches there, how they teach, and what they are teaching, providing interested teachers and counselors, instilling higher education possibilities early, and expanding cultural awareness (Freeman, 1997). Overall, the study allowed the students a voice to truly express relevant issues related to college choice versus simply relying on statistical data, as seen in most previous studies. Freeman's work is important to this study because it gives evidence that the students from non-majority groups withstand much greater challenges to obtaining undergraduate and graduate degrees because of the historical obstacles related to cultural and social capital. Because of this, determining specific

details about the cultural and social capital within non-majority groups is necessary to change and overcome said challenges.

Hossler et al. (1999) conducted a nine-year longitudinal study of Indiana high school students from 1986-1994. Both quantitative and qualitative methods were utilized during the course of the research. First, a cluster sampling technique was used to survey 4, 923 students and their parents in 1987. Participants represented the ethnic, SES, and geographical diversity of Indiana and came from urban, rural, northern, and southern areas of the state. Smaller subsamples of the original group were surveyed a total of 8 times from 1987-1990. Qualitative methodology was incorporated as 56 students and their parents were interviewed in-depth a total of nine times between 1989 and 1994 (Hossler et al., 1999). Within the study, all students were freshman at the start of the research and were four years post high school when the study concluded. Hossler et al. (1999) organized their research and findings using a three-stage model of college choice: predisposition, search, and choice (Hossler & Gallagher, 1987). Five questions were addressed during the study:

1. How do students develop college aspirations? How do their plans change and evolve over time?
2. How and when do students find out about college?
3. How do students choose colleges?
4. How do tuition costs and financial aid influence the college decision-making process?
5. Do students achieve their college aspirations, and what factors affect whether they do? (Hossler et al., 1999, p. 128).

Overall, one of the most important findings of the study was the difference between influences on the students' aspirations versus influences that affect their achievements (Hossler et al., 1999). In addition, the researchers found that there are significant differences between what influences college decisions of students in ninth grade versus those influences in the twelfth grade.

During the predisposition stage, Hossler et al. (1999) found that most students have developed relatively stable post-high school plans by the time they complete ninth grade. In the fall after graduating from high school, greater than 60% of students in the study had followed through on the plans formulated in ninth grade. Further, 70% of subjects had realized plans formulated in the tenth grade (Hossler et al., 1999). It is interesting to note that those students whose postsecondary plans changed between their ninth and twelfth grade years were less likely to attend college. Thus, the window of opportunity in influencing college plans is during or before a student's freshman year of high school (Hossler et al., 1999).

Consistent with earlier research on college choice (Hossler et al., 1989; Paulsen, 1990), parental encouragement is the key factor in influencing students' college plans. Other factors impacting the predisposition phase include parental educational level, student achievement (grade point average [GPA]), peer influence, and student involvement in high school organizations and activities (Hossler et al., 1999).

In the search stage, tenth-grade students were able to name the actual colleges they were considering (Hossler et al., 1999). During that same year of school, students were able to articulate (even more so than in eleventh grade) what college attributes were most important to them, such as size, cost, and academic selectivity, but not related to specific schools. In their ninth and tenth grade years, students in the study were not interested in tuition and financial aid,

but their parents were. In their junior year, students were more active in gathering information about colleges, and moved beyond their parents, siblings, and peers to sources such as teachers, guidance counselors, and college admissions staff. In addition, theysought written material and pursued college visits. This move demonstrated students' greater reliance on their social capital. Students were most active in this phase from late eleventh grade to early twelfth grade (Hossler et al., 1999).

Patterns of college choice were most difficult to determine in the last stage (Hossler et al., 1999). It seems that though high school sophomores who plan to attend college have an idea about what specific schools they want to attend and what college attributes they are looking for, they do not actively pursue information gathering, as graduation and college attendance still seem far away. However, this changes as students move into their junior year. As information gathering begins and they learn more about their chosen schools, they become less certain about their plans. Thus, between the sophomore and senior years, a period of uncertainty occurs in the junior year, as more specific questions arise that the students must answer about their college plans. During their last year of high school, students are able to narrow down their choices and become more certain about desired institutional attributes (Hossler et al, 1999).

Finally, secondary school students generally are not concerned about tuition or financial aid until their final year of high school. Parents of high school students were aware of this as early as the ninth grade (Hossler et al., 1999). Results of the quantitative portion of the study found that most students and parents were well informed about financial aid and its availability. These results also indicated how much financial aid might affect the decision to attend a certain college. However, findings differed during the interviews. Both parents and students indicated that the consideration of financial aid alone would not have an effect on matriculation decisions

(Hossler at al., 1999). As seen in findings during the predisposition phase, the most important consideration in whether or not an individual attended college was still related to strong parental support and encouragement. These findings are important, as cultural capital, that information transmitted to students from their parents about the value of a college education, is a key variable of this study in the context of graduate school enrollment.

Influence of Cultural and Social Capital on Undergraduate Choice

Multiple research studies have explored the influence of cultural and social capital on undergraduate college enrollment (Pearce & Lin, 2005; Perna, 2000; Perna & Titus, 2005; Rowan-Kenyon, 2007). Though more current research still relies on quantitative methods, researchers have been able to study an expanded number of groups (i.e., Whites, African Americans, Hispanics, and Asian Americans) to determine what shapes the formation of their college choice.

Perna (2000) determined which factors affected the decision to enroll in college among African-American, Hispanic, and White students. In addition to using a model based on a traditional econometric approach, Perna (2000) also included measures of social and cultural capital, such as provision of information about college and value placed on obtaining a college education. These measures were correlated with items on the NELS, such as high school quality, desegregation, and location, student educational expectations, parental encouragement, parental involvement in student's education, parental educational attainment, peer encouragement, encouragement and help from others (teachers and counselors), and the use of tools to prepare for college admissions testing (Perna, 2000).

Demographic data showed that within the sample, 42% of Whites, 35% of African Americans, and 26% of Hispanics attended college the fall semester following graduation (Perna,

2000). Economic resources available for college and the benefits of bachelor's degree completion varied in all three groups. Although Whites have higher family incomes than both African Americans and Hispanics, White students had higher direct costs of attending college. The higher direct cost of White students for college attendance was because African American and Hispanic students were found to be more likely to receive grants. In addition, in comparison to Whites and Hispanics, African American individuals were more likely to obtain loans. Perna (2000) also found that the future monetary benefits of baccalaureate degree completion were greater for African Americans than for both Whites and Hispanics.

Data were analyzed using descriptive and logistic regression analyses. African American and Hispanic students were more likely than Whites to have information available to them about college, as determined by NELS data related to high school location and region. Other types of social and cultural capital possessed by the subjects differed by race/ethnicity. Results also showed that parents of White students were more likely to have obtained a higher level of education than that of African American and Hispanic parents. More African American and Hispanics received assistance from school personnel with college applications, essays, and in applying for financial aid than White students. In addition, parental involvement was less for Hispanic students than it is for their African American and White counterparts (Perna, 2000).

Perna (2000) identified four major conclusions via her research. First, the lower enrollment rate of Hispanic students as compared to Whites and African Americans is due to this group's decreased types of capital (i.e., test scores, curriculum, and educational expectations) needed to facilitate college enrollment. Next, the analyses in Perna's study demonstrate why it is important to realize the differences among racial/ethnic groups in the variables that influence college enrollment decisions. Social and cultural capital were important contributors to college

attendance decisions for all three groups. For African American and Hispanic students, social and cultural capital were equally as important as academic ability (Perna, 2000). Some differences among groups were noted within the variables measuring social and cultural capital. Among African Americans, educational expectations were a much less likely predictor of the decision to attend college than for students who were White or Hispanic. Perna (2006) suggested that African Americans may have decreased knowledge and access to information about how one acquires a college education to realize one's educational objectives. This finding is important in pointing to future research aimed at exploring differences among racial/ethnic groups in regard to the contribution of social and cultural capital to one's educational expectations. Further, teachers and counselors would have a better idea of the needs of individuals who are African American relevant to preparation for college attendance.

Although cultural and social capital are critical factors in enhancing the strength of explanatory models for college enrollment, Perna's third major finding was that academic ability remained a significant predictor among the three groups. Perna's conclusion, as in previous work, suggested that there is a persisting case for improving the academic achievement of African American and Hispanic students as a means of in increasing their college enrollment (2000). This is not an argument for merely improving the academic achievement of Hispanics and African Americans but an exercise in demonstrating to these students how important academic achievement is in guiding choices and selection of continued formal education. Last, Perna (2000) concluded that the addition of financial aid alone is not significant enough to increase college access among students from all three groups. Actually, loans reduce the possibility that African Americans will ultimately enroll in college. Perna's research provides

evidence for continued work in exploring the specific differences in social and cultural capital predictors of college enrollment among groups of students according to race/ethnicity

In a 2005 study, Perna and Titus also analyzed data from the NELS to explore the relationship between parental involvement and the likelihood of college enrollment across racial/ethnic groups (Whites, African Americans, Hispanics, and Asian Americans). More specifically, the researchers sought to determine the relationship between parental involvement (a form of the students' social capital) and college enrollment in a 2- or 4-year institution in the fall after high school graduation after controlling for other student predictors of college enrollment and school characteristics. The study also explored the relationship between various types of parental involvement and college enrollment in a 2 or 4-year institution among racial/ethnic groups when controlling for student and school characteristics and the relationship between characteristics of social networks at school and college enrollment at a 2 or 4-year institution after controlling for student predictors .The data used in this study came from the 1992 (second) and 1994 (third) follow-ups from the NELS. In these follow-ups, the students were high school seniors and then two years post-high school (Perna & Titus, 2005).

Results of the analyses demonstrated that certain types of parental involvement, such as the frequency in which parents discuss education with their high schoolers, regularity of parents volunteering at their child's school, and parental contact with the school about their child's academic performance, increase the likelihood of college enrollment (Perna & Titus, 2005). However, a decrease was shown as the parent contacts to school increased due to behavioral issues. Overall, the post-secondary plans of students' peers also affect the likelihood of students' enrollment. Having friends plan to attend a 2-year college increases one's likelihood of enrollment at a 2-year college, but decreases one's likelihood of college enrollment at a 4-year

institution. The likelihood of one's enrollment at both types of colleges and universities increases as their peers plan to enroll at a 4-year institution. In addition, one's relocation (as a measure of disruption of social capital) decreases the likelihood of college enrollment at 2 and 4-year universities (Perna & Titus, 2005).

While descriptive data showed that Whites and Asian Americans are more likely to enroll in 4-year universities than African American and Hispanic students, African Americans, based on data analyses, appear to be the most effective group in the conversion of parent-school contact about academics into college enrollment. However, African American parents are reportedly less effective in the conversion of parent-student discussions about education into college enrollment. While it was unclear as to what was the most desirable form of habitus related to parental involvement among groups, it is important to note that there were distinct differences and strengths among all race/ethnic groups (Perna & Titus, 2005).

Next, despite one's social, economic, cultural, and human capital, the likelihood of enrolling in a 2 or 4-year institution after high school graduation is related to the number of resources accessed via social networks at the high school attended (Perna & Titus, 2005). The likelihood for college enrollment at 4-year universities increased as parental contact about academic issues increased, but decreased as parental contact about behavioral issues increased. College enrollment likelihood at 2-year universities was positively related to one's economic capital (family income) and cultural capital (parental education and parental educational expectations). Finally, it was found that African American and Hispanic students are less likely to possess the types of capital (e.g., social, economic, cultural and human) that translate into college enrollment, additionally, these students typically attend high schools that have fewer resources (i.e., social networks) that facilitate college enrollment (Perna & Titus, 2005).

More recently, a study was completed that explored the timing and characteristics of those students who had previously not been researched—those students who choose to delay college enrollment immediately following high school graduation. Rowan-Kenyon (2007) used the 1992, 1994, and 2000 data from the NELS to determine the predictors of delaying college entry, and the effects of SES on delayed college enrollment. The author used descriptive and multinomial logit regression analyses to address her research questions. Descriptive results showed that 68% of graduates enrolled in college immediately, 17% delayed enrollment, and 14% did not enroll by 2000 (within 8 years of high school graduation). Timing of college enrollment varied based on race/ethnicity, gender, and SES (Rowan-Kenyon, 2007). African American and male students tended to delay college enrollment, while those students of high SES enrolled immediately after high school graduation. Financial resources, as determined via cost importance, aid, and tuition, did not seem to influence delayed enrollment. In addition, graduates with lower achievement scores tended to delay enrollment or chose not to enroll in college at all.

Regarding social capital, parental involvement was higher for those students who chose to enroll in college immediately. These students also had positive student-teacher relations, were supported in the process by their schools, and were more likely to attend private schools. In considering cultural capital, mothers' educational expectations were higher for those students that enrolled the fall after high school graduation. Parental involvement was also greater for those students who enrolled at the traditional time. In addition, these students also had greater educational resources/materials in the home and had taken music, art, or dance classes (Rowan-Kenyon, 2007).

Finally, Rowan- Kenyon (2007) reported her findings regarding predictors of college enrollment timing. SES, academic achievement, and preparation were important predictors of enrollment timing after controlling for student background, cultural capital, and social capital. Additional predictors of immediate enrollment also included level of math completed, parental involvement, high school support, mothers' educational expectations, and peer encouragement. SES was very influential in predicting immediate and delayed enrollment versus not enrolling, even when controlling for other variables (Rowan-Kenyon, 2007).

Other Types of Capital Influencing College Choice

In their 2005 study, Pearce and Lin compared the educational attainment of Chinese Americans to that of White Americans and based this comparison on factors related to social structure and cultural capital. More specifically, the researchers hypothesized that though both groups share social structural influences, the cultural aspects would be different.

In exploring cultural capital, Pearce and Lin (2005) discussed some interesting concepts related to dominant versus non-dominant culture. According to Bourdieu and Passeron (1977), cultural capital is identified as being dominant or non-dominant. Thus, dominant culture is associated with the dominant group. In the United States, the dominant culture is associated with "White" culture. Nondominant culture is associated with "other" groups, such as Chinese Americans (Pearce & Lin).

Oppositional and complementary culture. Within the culture previously described (Pearce & Lin, 2005), there are generally two ways in which the members of non-dominant culture associate with members of the dominant culture, via oppositional or complementary culture. Among those in the oppositional culture, "racial discrimination and limited SES prospects compel some ethnic minority groups to maintain characteristically different approaches

to opportunity structure" (Pearce & Lin, p. 22). For example, among African Americans, the history of slavery and racism in this country causes many individuals in this group to lower their educational aspirations, as they may tend to believe that high academic achievement is only of benefit to White, middle-class students (Fordham & Ogbu, 1986; Pearce & Lin, 2005). Thus, within the members of this group, high academic achievement may be perceived as "acting White". The "burden of 'acting White'" (p. 176), as described by Fordham and Ogbu, is the view that participation in formal learning at school is "acting white" and is the result of perceiving academic success through the lens of White Americans. It has been proposed as one key explanation for the poor performance in school by Black Americans.

Fordham and Ogbu (1986) noted that despite experiencing similar challenges (i.e., language, cultural, and educational barriers), some minority groups do achieve academic success. Because of this variability, Fordham and Ogbu proposed that non-dominant groups be categorized into three types. First, those who are minorities due to sheer numbers are known as autonomous minorities. The second group consists of immigrant minorities, who are those individuals who voluntarily came to the United States in order to improve their economic, political, and social condition. The third group is known as subordinate or castelike minorities. Individuals in the third group were forced to permanently be assimilated into American society via slavery or conquest. Black Americans are a primary example of a castelike minority, as they were forced to America as slaves and then, even once emancipated, were assigned a menial status. Other groups who share characteristics of castelike minorities include American Indians, Mexican Americans, and Native Hawaiians (Fordham & Ogbu, 1986).

As mentioned previously, dominant groups minimalize minority culture through cultural alienation and annihilation in order to maintain the power of the dominant group (Freeman,

2006). Most significantly, White Americans minimized Black Americans through education. Among slave communities, those Black individuals who could read were respected among the group (Sambol-Tasco, 2004). In response to the fear that literate members of the slave community would lead a revolution, Southern slave owners passed some of the earliest legislation in 1740 that barred teaching slaves to read or write.

Historically, Black students have received substandard schooling founded by White perceptions of the educational needs of Black students (Fordham & Ogbu, 1986). The belief perpetuated by White Americans was that individuals from minority groups (i.e., Black Americans) were incapable of achieving academic success. In addition, Black Americans were not afforded the opportunity to be successful academically, and were not fairly and adequately rewarded even when they were successful.

In response to the way in which White Americans have treated minorities, Black Americans, through persisting oppression, have created a sense of collective identity that opposes the social identity of White American culture (Fordham & Ogbu, 1986). The development of oppositional culture in the Black community is directly related to the belief and realization that regardless of an individual's ability, education, place of origin, American residence, economic status, or physical appearance, Black Americans cannot expect to be treated as equals by their White American counterparts. Further, Black individuals have created an oppositional frame of reference that consists of strategies that aid in protecting their identity and in maintaining strict boundaries between Black and White cultures (Fordham & Ogbu).

Because of having adopted an oppositional frame of reference, some Black individuals may hold the belief that certain behaviors, activities, events, symbols, and meanings are not appropriate for them because these actions are identified with White culture (Fordham & Ogbu,

1986). In addition, there are actions that are appropriate simply because these behavior and meanings are not a part of White culture, so they become a part of Black culture. Thus, being academically successful can be considered "acting White".

The concept of fictive kinship can be developed among subordinate minority groups. Fictive kinship "refers to a kinshiplike relationship between persons not related by blood or marriage in a society, but who have some reciprocal social or economic relationship" (Fordham & Ogbu, 1986, p. 183). Within American society, a kinship exists among Black Americans, but in a much broader sense as there is a recognized collective identity of "brotherhood " and "sisterhood" evident to nearly all members of American culture. According to Fordham and Ogbu, the Black American fictive kinship system likely was the result of how White Americans treated Black Americans. Fictive kinship portrays the specific mindset or world-view of individuals who are fittingly labeled as "Black". Within this context, "Black" is not just a skin color. One's skin color, features, or descent does not necessarily make a person Black or ensure membership in the group. An individual may actually have Black skin color, but may decide not to pursue membership in the fictive kinship system. The concept of fictive kinship represents the moral judgment the group generates about its members (Fordham & Ogbu). Yet, there are cases in which a Black person refuses association with the group because his or her behavior, activities, and absence of loyalty are at odds with the fundamental beliefs of the group (Fordham & Ogbu).

An important concept within the fictive kinship that exists among Black Americans is the emphasis on group loyalty, namely in instances where conflict or competition exists with Whites (Fordham & Ogbu, 1986). If a member of the group exhibits an attitude or behavior that is considered to be contradictory to that of the whole, that member may be negatively viewed.

Within the context of formal education and employment, a Black individual who is deemed successful may be mocked or rejected by the group. According to Fordham and Ogbu (p. 185), "fictive kinship means a lot to Black people because they regard it as the ideal by which members of the group are judged". Further, it is the method by which the group classifies real versus inauthentic members.

Fictive kinship may be taught to Black children by their parents and peers while growing up (Fordham & Ogbu, 1986). Teaching by parents and peers happens early on and often, as it appears that it becomes ingrained into the next generation of Black Americans. Because of this, Black children are likely to have a strong awareness that their success potential will be similar to that of their peers and community. Within peer Black relationships, membership in the group is imperative, especially in dealing with Whites and White society as a whole. In interactions with members of the dominant (White) culture, an unspoken belief among Black groups is that members of my group are still viewed as a brother or sister, no matter what they do or do not do (Fordham & Ogbu).

In order to explore the fictive kinship phenomenon that exists within Black culture, Fordham and Ogbu (1986) completed an ethnographic study with high school students in Washington, D.C. "Capital High" is a predominately Black school in a low-income neighborhood. The evidence of fictive kinship at the school was seen via conflicts between Blacks and Whites, and also among Black students and Black teachers. Black students perceived Black teachers as perpetuating the dominant culture. Fordham and Ogbu also noted that there was a persistent need for Black students to prove their loyalty and identity to the group. Black students achieved this group loyalty by employing strategies to keep each other from doing things that suggest they are "acting White". Some of these "White" activities included speaking

stndard English, listening to White or classical music, going to cultural events (e.g., ballets, operas, or orchestral performances), spending a lot of time in the pursuit of good grades (studying at the library and putting forth a lot of academic effort), doing volunteer work, being on time, or acting like one is more superior to others (Fordham & Ogbu).

The research done by Fordham and Ogbu (1986) focused on how Black students at Capital High coped with the burden of "acting White", which was operationally defined as:

> [The] various strategies that Black students at Capital High use to resolve, successfully or unsuccessfully, the tension between students desiring to do well academically and meet the expectations of school authorities on the one hand and the demands of peers for conformity to group-sanctioned attitudes that validate Black identity and cultural frame on the other (p. 186).

The sample used in Fordham and Ogbu's study (1986) included 33 eleventh grade students, and ethnographic data were collected for over a year. Data gleaned from eight participants were used as the cases described in their published article. Equal numbers of Black male and female students were included in the cases, as well as equal numbers of underachieving and high achieving students. It is important to note, as evidenced by student records, all individuals (even those deemed underachieving) in the sample had the potential to be academically successful in school (Fordham & Ogbu). However, underachieving students had seemingly chosen, either consciously or unconsciously, to not put forth an honest effort into their school performance in order to avoid "acting White".

Findings by Fordham and Ogbu (1986) in the group of underachieving students included the primary theme of avoidance from being perceived as "acting White" by their peers. All four of the students reported that they were aware of the importance of doing well in school and

spoke about the need to limit their academic achievements in order to continue to be accepted by their peer groups. The two males in the group reported that being athletes (or being involved in extracurricular activities, such as a cheerleading or band) allowed them to challenge any peer claims of "acting White" when they made good grades. Both female students stated that because of their families' low SES, they had already assumed that they would not be able to go to college. Thus, working to get good grades was not a priority, especially if it came at the price of being excluded from their peer groups (Fordham & Ogbu, 1986).

High-achieving students at Capital high also faced the issue of learning how to cope with the burden of "acting White". These students were able to develop strategies that allowed them to be academically successful and be able to maintain Black peer group membership (Fordham & Ogbu, 1986). Both of the males in this group described that one effective approach they used to conceal their good grades was to act like comedians, thus having others believe that they didn't have to work very hard to make decent grades (Fordham & Ogbu). Another strategy employed by a male student was to befriend bullies or thugs that would stick up for him should he be accused of being a "brainiac".

Females in the high-achieving group were also able to camouflage their academic abilities, but employed a different set of strategies (Fordham & Ogbu, 1986). Both, unlike the male students, held low profiles in school. One female student reported working very hard at being inconspicuous regarding her grades. She explained that she rarely answered questions in class and shied away from participating in intellectual extracurricular activities. The other female student reported deliberately missing class and putting forth the minimal amount of effort needed to get the maximal return. This student logged inconsistent performance in school from term to

term, and also assumed the role of comedian to keep her peers from accusing her of "acting White".

Fordham and Ogbu (1986) generated three primary implications from the analysis of their study. First, the researchers suggested that change must occur on a very large, cultural scale in order to influence opportunity structure via elimination of the job ceiling and other barriers among Black Americans. In order for Black students to alter their perceptions of their future potential in the workforce, they must believe that they have greater opportunities available to them and greater employability within their areas of expertise. Second, Black and White students should have equitable academic careers (i.e., the removal of all educational barriers). Third and most important due to the nature of this study, there should be recognition of and educational policies aimed at alleviating the learning and performance problems generated by the burden of "acting White". Fordham & Ogbu reportedly viewed this is the responsibility of both school personnel and the Black community

On the other end of the spectrum, complementary culture also competes, but not in an oppositional way, with the dominant culture in such areas as educational achievement (Pearce & Lin, 2005). Within complementary cultures, similar beliefs about a certain value may develop separately and without reciprocal influence. For example, two cultures might value the concept of monogamy (Pearce & Lin). When individuals from these two separate cultures come together, they both share mutual respect and belief of the same value, which illustrates the concept of complementary culture. Though it may appear that Asian Americans, or more specifically, Chinese Americans are aspiring to the dominant culture by valuing high academic achievement, it is more likely due to the concept that these individuals have a culture that meshes with the dominant culture (Pearce & Lin).

The data used in Pearce and Lin's study (2005) consisted of the NELS-2000 follow-up. Variables related to social structure consisted of gender, family income, location of school district, family composition, and immigration status. Cultural capital variables included parental educational attainment, parental educational expectations, parental school involvement, and parenting style (Pearce & Lin). Logistic regression was used to examine the model and the dichotomous dependent variable was highest postsecondary degree attained.

Results indicated that although educational attainment is comparable among White and Chinese American students, 65% of Chinese American students have attained a bachelor's degree or higher versus 42.7% of Whites (Pearce & Lin, 2005). Interestingly, 10.9% of Whites have an associate's degree, versus only 1.5% among Chinese students. The researchers explained that this may be due to cultural differences, such as the Chinese concept "Zheng Ming". This belief demands that one strive higher, as the degree you earn equals the life that you lead (Pearce & Lin). Thus, students from the Chinese culture rarely are content with an associate's degree. This is an example of cultures that promote educational attainment, but with other cultural beliefs that are fundamentally different.

In addition, results of the study revealed several differences in cultural attributes between the two groups. In exploring parental involvement, Chinese parents are much less likely than White parents to attend school events, meetings, classes, or to speak with counselors (Pearce & Lin, 2005). Further, Chinese parents are less likely to discuss school with their children or check their homework. Although most students reported that they did not rely on their parents to help with their problems, Chinese students demonstrated greater independence. In considering parenting style, Chinese parents trust their children at a slightly higher incidence than White parents. Due to this increased mutual trust, Chinese students are more likely to follow their

parents' directions than are White students. Parents of Chinese children are more likely to restrict TV viewing, but required fewer chores to be done by their children (Pearce & Lin).

Within Pearce and Lin's study (2005), logistic regression was performed to explore the relationship between cultural capital and postsecondary educational attainment. Overall, the cultural capital variables demonstrated a significant impact on both groups, but the magnitude and direction of this influence varied (Pearce & Lin). Thus, these results may be explained by the differences in White and Chinese American culture. In both groups, parents' education had a positive influence on their children's educational attainment. However, the strongest factor was related to the Chinese mother's level education. If the mother had a college education, then her children were three times more likely to attain the same (Pearce & Lin). Parental expectations also generated a positive influence on college attendance, but this was much greater among Chinese American students. Both White and Chinese students were positively affected by discussing school activities with their parents and having parents visit the classroom, but the degree of the influence was double in both instances among Chinese individuals. Finally, White parents attending a school meeting had a positive influence on their children, but negatively influenced Chinese students.

Through their results, Pearce and Lin (2005) concluded that cultural capital factors have a strong influence on student achievement in both White American and Chinese American culture. However, instead of Chinese Americans assimilating into the dominant (American) culture, it appears that educational attainment, as influenced by parental involvement, is rooted in their own cultural beliefs. Both cultures are successful at promoting educational attainment. However, the means by which this is achieved are harmonious, but fundamentally different (Pearce & Lin).

Critical race theory. Yosso (2005) used critical race theory (CRT) to question conventional ideas about cultural capital. "CRT shifts the research lens away from a deficit view of Communities of Color as places of cultural poverty disadvantages" (Yosso, p. 69). With this shift, CRT emphasizes the positive as socially marginalized groups often have a wealth of cultural knowledge, skills, abilities, and contacts that frequently are not recognized or acknowledged by society. In addition to the types of cultural capital discussed by previous research studies based on Bourdieu's work (Bourdieu & Passeron, 1977), Yosso proposed different but equally important forms of capital that can increase community cultural wealth. The first type of alternate capital is aspirational, which means that despite the existence of actual and perceived barriers, one still has the ability to keep alive his or her hopes and dreams for the future. This type of capital demonstrates the resiliency of marginalized groups, whose members permit themselves and their children to envision possibilities beyond their current circumstances (Yosso, 2005).

The second type of capital identified by Yosso (2005) is linguistic capital. Often, students from minority groups have experiences in more than one language or communication style. The positive benefits of these multiple language and communication styles result in enhanced intellectual and social skills. Linguistic capital also includes an individual's ability to communicate through art, music, or poetry, being a participant in a culture with a rich storytelling tradition, and children who perform the role of translator for their parents or other adults (Yosso, 2005).

Familial capital is the third alternative type of capital proposed by Yosso (2005). In this sense, familial capital stems from one's family, but also includes extended family, kinship, and the community in which one is connected to. The teaching of caring, coping, and providing

occurs within and between families but can also be promoted via sports teams, school groups, religious activities, and in community venues (Yosso, 2005). Within familial communities, members are able to recognize a shared connection surrounding like concerns and gain a sense of not being alone in dealing with their challenges. An example of this would be the description of the fictive kinship system that exists among Black Americans (Fordham & Ogbu, 1986).

The fourth type of capital identified by Yosso (2005) is social capital. Within the context of community cultural wealth, social capital consists of network and community resources that assist group members in the navigation of societal establishments. One example of this would be providing a student communal resources to assist one with locating and obtaining a scholarship for college (Yosso, 2005). Not only would a student receive assistance in preparing the scholarship application, but would also be given emotional support to know that he or she is not isolated in the pursuit of a college education. Social capital is the means by which some non-dominant cultures gain access to education, legal assistance, jobs, and medical care. Once resources are attained, group members share information so that others can benefit from these societal resources (also known as the "lifting as we climb" tradition [Yasso, 2005, p. 80]).

Navigational capital is the fifth alternate form of capital recognized by Yosso (2005). Navigational capital allows individuals from non-dominant cultures to maneuver through social institutions not established with them in mind, which may involve having to face a racially-charged or hostile environment (i.e., college, employment, health care, or the legal system). In fact, the resilience developed as a result of these challenging experiences may allow students to not only survive, but to flourish (Yosso, 2005).

The last type of alternate capital recognized by Yosso (2005) is resistant capital. Created via behavior that opposes disparity and inequity, resistant capital includes the skills and

knowledge one gains that helps individuals to challenge the status quo and to transform oppressive societal institutions. Examples consist of the lessons African American or Latina mothers teach their daughters, such as valuing themselves despite racial, gender, or class inequality (Yosso, 2005).

Winkle-Wagner (2010) discussed the limitations of Bourdieu's theory in terms of the context in which cultural capital was defined. Bourdieu developed his theory based on his analysis of class as it was structured in France (Bourdieu & Passeron, 1977). Within this French context, class and high-status cultural capital existed in a more homogeneous society with distinct boundaries of class and did not take race/ethnicity or gender into account. The evidence provided by Pearce and Lin (2005), Fordham and Ogbu (1986), and Yosso (2005) suggests that alternate forms of capital created by non-dominant cultures (sometimes created in response to treatment by the dominant culture) should be considered. Winkle-Wagner indicated that the same ideas about cultural capital related to class may not exist similarly in a more heterogeneous culture, such as that in the United States (2010).

CRT and the concept of community cultural wealth (Yosso, 2005), as previously described, require that society refrain from viewing the cultural capital of non-dominant groups as deficient but begin to view it as advantageous for non-majority groups in navigating social institutions such as education, the job market, legal services, and health care. The practice of developing key knowledge and skills by individuals in minority groups to achieve success despite historical oppression provides a strong impetus for studying which measures of cultural and social capital are most influential to college and graduate school enrollment according to gender, race/ethnicity, and SES. It also provides a solid case for realizing that varying types of

cultural and social capital among dominant and non-dominant cultures may lead to the same outcome but may occur in very different ways.

Influence of Cultural and Social Capital and SES in Graduate School

Fewer studies have addressed the influence of cultural and social capital among those individuals who enroll in graduate school. Perna (2004) attempted to build on the theoretical framework established within undergraduate enrollment trends (Perna, 2000; Perna & Titus, 2005; Rowan-Kenyon, 2007; Pearce & Lin, 2005), applying this framework to understanding the influence of cultural and social capital according to gender and ethnic group differences in post-baccalaureate enrollment. Walpole (2003) explored the effects of SES on college experiences and outcomes among students from different backgrounds. In a 2007 study, Walpole investigated the effects of SES on capital accumulation, conversion, and reinvestment among African-American students.

Influence of cultural and social capital on graduate school. Perna (2004) used a conceptual model based on the work of Bourdieu in her study which presumed that one's decision to enroll in a post-baccalaureate degree program is a function of gender, race/ethnicity, expected costs and benefits, economic and academic resources, and both cultural and social capital. Participants were categorized into one of five racial/ethnic groups, including Asian, Black, Hispanic, White, and other (i.e., American Indians/Alaskan Natives, non-resident aliens, those in groups with too few members to be recognized, and those with unknown race/ethnicity).

Within the analysis, the dependent variable determined the most advanced degree a student enrolled in by 1997, four to five years after graduating from college. The five enrollment categories consisted of did not enroll, enrolled in a submaster's program (e.g., certificate,

associate's, or bachelor's degree program), enrolled in a master's program, enrolled in a first-professional program (i.e., medicine, law, or MBA), or enrolled in a doctoral program. Results were used to establish patterns of enrollment among male and female college graduates, and then among the five groups according to race/ethnicity (Perna, 2004).

Findings indicated that 48% of participants had enrolled in some type of educational program by 1997. Eighteen percent enrolled in a submaster's degree program, 20% in a master's degree, 7% in a first-professional program, and only 3% were working on doctorates (Perna, 2004). It was determined that because of such few cases, doctoral degree program enrollment would not be part of the data analysis.

Based on the study's multinomial logistical analyses, as seen in studies among undergraduate students, the addition of measures of cultural and social capital to traditional econometric variables improved the explanatory power of the model of post-baccalaureate enrollment (Perna, 2004). Specifically, parental educational attainment, a measure of cultural capital, was found to be a statistically significant predictor of post-college graduation enrollment. Among social capital variables, Carnegie classification of one's undergraduate institution and attendance at a two-year institution prior to receiving an undergraduate degree increased the likelihood of post-baccalaureate enrollment (Perna, 2004).

Perna (2004) found that enrollment patterns for post-baccalaureate education differed according to gender. More women than men tended to enroll in submaster's and master's degree programs, while men were more likely than women to pursue first-professional and doctoral degrees. Several explanations were offered for the overrepresentation of females in submaster's and master's programs. First, after controlling for other variables, Perna (2004) observed that both women and men had a higher likelihood of enrolling in a submaster's program if they

received a bachelor's degree in a field in the lowest quartile of starting salaries (such as education, history and psychology) rather than in the highest quartile of starting salaries (e.g., math, sciences, health professions, and engineering). Female participants receiving bachelor's degrees in fields with the lowest quartile salaries were more likely than females with salaries in the highest quartile to register in a master's program. Among males in the study, recipients of degrees in majors in the lowest quartile salary range were as likely to enroll in a master's program as those in the highest quartile salary range. It is also important to note that a greater percentage of females than males majored in fields in the lowest quartile salary range (38% female to 24% male) and a smaller percentage of females than males received degrees in majors in the highest starting salary quartile (16% to 23%).

The second explanation for the overrepresentation of females among master's degree enrollees was related to gender differences demonstrated in the distribution of undergraduate grade point average (GPA). Within the study, it was found that the likelihood of enrolling in a master's program increased when an individual had a GPA above B's and C's (Perna, 2004). Thus, women were more likely to enroll in master's programs than men because they were more likely to have higher GPA's (13% of women versus 20% of men reported undergraduate GPA's of B's and C's or lower).

Though statistical analysis did not explain the enrollment patterns of participants in first-professional degree programs, as women were underrepresented, Perna used descriptive analyses to generate three potential reasons for gender differences in enrollment in these degree programs (2004). First, majoring in a field in the lowest quartile of starting salaries was found not to promote enrollment in first-professional programs among women. So, because the female participants were more likely have graduated in these lower quartile salary areas, fewer of them

tended to enroll in first-professional degree programs. The same pattern among male participants was not observed (Perna, 2004), as the odds of enrolling in a first-professional degree program were actually greater for males majoring in those fields in the lowest quartile for starting salary.

The second proposed reason for gender differences related to first-professional program enrollment resided in both participants' taking or not taking the SAT or ACT or and participants scoring low on these college entrance exams. Both women and men are less likely to enroll in first-professional degree programs than their counterparts in the study who scored in the two upper quartiles of the SAT/ACT (Perna, 2004). Because fewer women than men take took college entrance exams (24% female versus 17% male) and scored lower (21% versus 16%), there was less of a tendency for women to enroll in first-professional programs than men.

The final reason for gender differences in first-professional enrollment is due to the Carnegie classification of the participants' undergraduate institution (Perna, 2004). Attending a Research I institution increased the likelihood that women would enroll in a first-degree professional program, even after controlling for all other variables and other measures of cultural and social capital. Because women were less likely than men to attend a Research I university, they were less likely than their male counterparts to attend a first-professional degree program (Perna, 2004).

In examining results related to participants' race/ethnicity, Perna (2004) found that Asians had the highest incidence of enrollment in all graduate programs. Equal numbers of Black and White participants pursued degrees in submaster's, master's and first-professional programs (Perna, 2004). Conversely, in consideration of expected costs and benefits, financial and academic resources, and social and cultural capital measures, Blacks in the sample were more likely to enroll in post-baccalaureate programs than Whites. Furthermore, Black women

were more likely than Black men to enroll in graduate programs within the study. These specific findings contradict the results found in earlier studies that majority groups (Whites and males) were the most likely individuals to attend graduate school (Perna, 2004). However, Perna's work provides evidence that continued research should be conducted within non-minority groups to discover the specific differences among these groups.

Influence of SES and matriculation to graduate school. Walpole (2003) used longitudinal data from the national study of college students, a part of the Cooperative Institutional Research Program, to compare the experiences and outcomes of students from low and high SES groups. The specific data used included initial data collection in 1985 (when subjects entered college), a four-year follow-up in 1989, and a nine-year follow-up in 1994. Walpole (2003) used cross-tabulation to present descriptive results and also utilized logistic regression analysis.

Individuals of low SES backgrounds who attended 4-year institutions worked more, studied less, and achieved lower GPAs than their high SES counterparts (Walpole, 2003). Following graduation from college, students from low SES backgrounds had lower salaries, lower levels of educational attainment, and lower levels of educational aspirations than their classmates with a higher level of SES. Walpole (2003) concluded that low SES students had not developed the conversion strategies leading to successful exchange of academic and cultural capital into economic and social profits.

Students from low SES backgrounds did realize greater social and economic benefits than their low SES peers that did not attend college, but were still disadvantaged in comparison to their high SES peers (Walpole, 2003). It is also important to note that there were students from low SES backgrounds that participated in certain college activities, such as assisting a faculty

member on a research project, interacting with faculty members outside of class, or participating in athletics, which demonstrated an increased likelihood that they would enroll in graduate school. Thus, some aspects of habitus learned during college were thought to can lead to more successful conversion strategies for students from low SES backgrounds (Walpole, 2003).

Walpole (2007b) used the same dataset as in her 2003 study to compare the differences between low and high SES students' college experiences and to establish the extent to which the students' investments in a college education were rewarded. Logistic regression analysis was then used to specifically examine capital conversion and reinvestment among African American students. (Walpole, 2007b). Results demonstrated that African American students reported successful college outcomes as 83% worked full time and 50% attended graduate school. In comparing participants from low and high SES backgrounds, a greater number of students from the high SES group worked full time, attended graduate school, and made more than $30,000 per year. Similar to her earlier study, Walpole (2007b) found that low SES seemed to be a greater hindrance to graduate school enrollment and degree attainment than race/ethnicity.

In my review of the literature, the influence of cultural and social capital has been deemed significant among the undergraduate population. Research completed among graduate students has demonstrated good potential for the same results, but is limited. My study extended Perna's work (2004) and addressed the isolation of cultural and social capital variables (instead of their use for solely improving the explanatory power of econometric variables) and SES (defined as family income) in determining the likelihood that bachelor's degree completers would enroll in and complete graduate school.

Chapter Three

Methodology

Introduction

The purpose of the present study was to further Perna's (2004) work by determining the influence of cultural capital and social capital on graduate school enrollment and completion. This chapter will provide a synopsis of the methodology for this study, including the research questions, the sample, instrumentation, data collection procedures, and data analysis. Before the commencement of data analysis, approval was sought from the University of New Orleans Institutional Review Board. In a letter dated October 10, 2013, the Board determined that the research and procedures in this study did not qualify as human subjects' research and, therefore, was not subject to their review. See Appendix A.

Research Questions

The primary focus of this study was to explore the relationship between cultural capital and social capital variables and whether these variables increase the likelihood that an individual will enroll in and complete a graduate program. The research questions that were addressed include:

1. Which variables relevant to cultural capital (i.e., parental educational attainment, whether English is the most frequently spoken language in the home) increase the likelihood that an individual will decide to attend and complete graduate school?
2. Which variables relevant to social capital (parental financial support for undergraduate education, existence of social networks through Carnegie classification and tuition, and peer networks determined by location of the university) increase the likelihood that an individual will decide to attend and complete graduate school?

3. What are the graduate school enrollment and completion patterns of bachelor's degree completers by gender?
4. What are the graduate school enrollment and completion patterns bachelor's degree completers according to race/ethnicity?
5. What are the graduate school enrollment and completion patterns of bachelor's degree completers from high SES and low SES backgrounds?
6. How do variables relevant to cultural capital influence graduate degree attainment among individuals from high SES and low SES backgrounds?
7. How do variables relevant to social capital influence graduate degree attainment among bachelor's degree completers from high SES and low SES backgrounds?

Study Design

Sample *(Baccalaureate &Beyond: 93/03* Participants). The sample in this study consisted of data collected via the *Baccalaureate &Beyond: 93/03*, a longitudinal study of students who earned a bachelor's degree during the 1992-1993 academic year, representing a population of 1.2 million individuals (Choy et al., 2008). The base year sample of *Baccalaureate &Beyond: 92/93* was generated as a part of the 1992-93 *National Postsecondary Student Aid Study*. In order to be included in the sample, individuals had to be eligible to participate in *National Postsecondary Student Aid Study*: *93* and had to have graduated from a bachelor's degree program from a post-secondary institution in the United States or Puerto Rico (Wine et al., 2005). The *National Postsecondary Student Aid Study*: *93* utilized a two-stage sampling design in which eligible institutions were first selected, followed by a selection of qualified students from these institutions. In order to be an eligible participant in the *National Postsecondary Student Aid Study*: *93*, students had to be taking courses for degree credit or

enrolled in an academic, occupational, or vocational program that was at least three months in length between July 1, 1992 and June 30, 1993. Additionally, those students completing their bachelors' degrees within the same time frame were also eligible for *National Postsecondary Student Aid Study*: *93* (Loft et al., 1995). Finally, 16,320 baccalaureate degree recipients from 1,360 institutions were identified for participation in the *Baccalaureate & Beyond: 92/93* sample (Wine et al., 2005). The *Baccalaureate & Beyond* cohort was interviewed again in 1994, 1997, and 2003. By the time the third follow-up was completed in 2003, a total of 8,970 respondents comprised the sample from which data had been collected (Wine et al., 2005). See Table 4, which provides demographic information about study participants (NCES, 2006).

Table 4

Percentage Distribution of 1992–93 Bachelor's Degree Recipients' Additional Degree Enrollment, By Student and Institutional Characteristics: 2003

Student and institutional characteristics	No additional degree enrollment[1]	Nongraduate degree or certificate[2]	Master's degree	Doctoral degree	First-professional degree
Total	52.1	7.2	31.2	4.5	5.0
Gender					
Male	54.4	6.3	27.4	5.7	6.2
Female	50.2	7.9	34.4	3.5	4.0
Race/ethnicity[3]					
White	53.0	7.0	31.1	4.4	4.5
Black	46.3	7.5	35.7	5.4	5.1
Hispanic	48.6	7.9	33.0	5.9	4.6
Asian/Pacific Islander	49.9	7.5	25.7	3.4	13.4
Other	49.7	20.4	23.3	3.8	2.8
Parents' highest education					
High school graduate or less	58.5	6.6	29.4	2.5	3.1
Some college	52.9	7.3	32.3	3.3	4.3
Bachelor's degree	52.4	7.4	29.7	5.2	5.2
Advanced degree	43.4	7.4	34.5	7.3	7.4
Dependency status and family income					
Dependent					
Lowest	52.4	7.0	30.0	5.4	5.2
Low middle	48.9	7.9	32.4	4.8	6.1
High middle	46.7	5.5	34.4	6.6	6.7
Highest	43.9	7.1	32.6	7.3	9.1
Independent	58.2	7.6	29.6	2.3	2.4
Age received bachelor's degree					
24 or younger	49.8	6.7	31.6	5.6	6.2
25–29	62.2	8.4	25.6	2.0	1.8
30 or older	55.5	7.8	33.0	1.8	1.9
Type of degree-granting institution					
Public 4-year	52.9	8.5	29.9	4.4	4.3
Non-doctorate-granting	54.1	9.6	31.7	2.1	2.5
Doctorate-granting	52.2	8.0	28.9	5.6	5.3
Private not-for-profit 4-year	49.4	4.9	33.9	5.2	6.7
Non-doctorate-granting	52.2	5.7	33.3	4.3	4.4
Doctorate-granting	45.6	3.7	34.7	6.3	9.7
Other	61.3	2.7	31.9	1.9	2.3
Undergraduate major					
Business and management	68.1	6.0	23.0	0.6	2.3
Education	40.8	7.5	46.5	3.0	2.3
Engineering, mathematics, or science	43.6	5.9	29.3	12.9	8.3
Humanities or social sciences	44.5	8.8	33.8	5.6	7.3
Other	56.7	7.4	29.4	2.2	4.3
GPA for undergraduate major					
Less than 3.0	63.8	8.8	22.9	2.1	2.6
3.0 or higher	50.1	6.5	32.9	5.1	5.4
Amount borrowed (undergraduate)					
Did not borrow	52.9	6.6	30.3	4.8	5.4
Less than $5,000	52.5	8.1	31.6	4.1	3.7
$5,000–9,999	51.0	7.0	34.0	3.8	4.2
$10,000–14,999	51.0	9.3	30.0	4.8	4.8
$15,000 or more	51.9	6.2	32.1	4.6	5.3

[1] No enrollment after the bachelor's degree earned in 1992–93 or enrollment only in courses not leading to a degree or certificate.
[2] Enrolled in a program leading to a technical diploma, associate's degree, bachelor's degree, or postbaccalaureate certificate.
[3] Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Other refers to American Indian or Alaska Native. Race categories exclude Hispanic origin unless specified.
NOTE: Detail may not sum to totals because of rounding. Estimates include students from the 50 states, DC, and Puerto Rico.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1993/03 Baccalaureate and Beyond Longitudinal Study (B&B:93/03).

Baccalaureate & Beyond: 93/03 Instrumentation and Data Collection Procedure

The *National Postsecondary Student Aid Study*: *93* utilized an interview to determine the means by which students and their families paid for their postsecondary training, and it also included questions related to background, enrollment, and employment (Wine et al., 2005). Refer to Appendix D for a listing of the *National Postsecondary Student Aid Study*: *93* data elements. Those selected to participate in the *Baccalaureate & Beyond: 92/93* cohort answered additional questions regarding future plans, namely graduate education and the pursuit of a teaching career in K–12. The first follow-up of the *Baccalaureate & Beyond: 92/93* cohort occurred one year after the participants' bachelor's degree completion. Interview questions were focused on such areas as employment search, transition, and training, family structure, community involvement, and financial status, such as earnings, student loans, and additional debt (Wine et al.). Both school and student level data were gathered through the collection of participant transcripts. Data retrieved via student transcripts included major and minor fields of study, grade point average information, courses completed, and grades achieved and are included in the data set.

The second follow-up to *Baccalaureate & Beyond: 92/93*, the *Baccalaureate & Beyond: 93/97*, was completed four years after the original *National Postsecondary Student Aid Study*: *93* data were collected (four years post-baccalaureate degree completion). This 1997 follow-up focused on post-bachelor's degree enrollment information, including graduate school field of study, matriculation intensity and length, finances, and degree completion (Wine et al., 2005). In addition, interview questions focused on job information and experiences (i.e., positions held, earnings, benefits, and work satisfaction). Those identified as teachers in a K-12 setting were surveyed about their career preparation, experience, and satisfaction (Wine et al.). As in the first

follow-up, the 1997 interview collected information on family formation and community involvement.

The last *National Postsecondary Student Aid Study*: *93* follow-up was completed ten years after the participants graduated from college. The *Baccalaureate & Beyond: 93/03* survey continued to collect the information included on earlier follow-ups (Wine et al., 2005). See Appendix E for a listing of data elements used in the *Baccalaureate & Beyond: 93/03* questionnaire. Refer to Table 5 for specific information about data collection.

Table 5

Baccalaureate & Beyond: 93/03 Survey Data

Information collected:

- Background/demographics
- Education (graduate programs, other post-baccalaureate education, expectations and attitudes)
- Employment (job seeking activities, labor market status history, current job-related information, and career)
- Teaching (eligibility determination for completing this section, certification-licensure status, teaching experience, current teaching job, perceptions and attitudes toward teaching)
- Finances and debt (income, debt and ownership)
- Family formation
- Civic participation (household composition, civic activities/political participation, and attitudes and opinions)
- Value of college education
- Value of other educational activities pursued since 1993
- Influence of accomplishments on current life in 2003

***Baccalaureate & Beyond: 92/93* data collection design.** The *Baccalaureate & Beyond: 93/03* follow-up consisted of a web-based, multimode data collection strategy that included self-

administered, telephone, and face-to-face interviewing options (Wine et al., 2005). For the first time in the history of the B&B Longitudinal Study, the follow-up survey was available to its cohort members via the Internet. The interview was designed by first considering the data elements of the previous follow-ups. The progression of the interview topics was as follows: education (postsecondary education obtained since *Baccalaureate & Beyond: 93/97* follow-up), employment (status, career characteristics, details about time spent outside the workforce), teachers (questions about teaching for teachers or those considering teaching), finances (the costs and benefits of earning a bachelor's degree, such as income, assets, debts, savings, and educational loan burden), and background (demographics, such as marital status, family characteristics, volunteerism, political activism, and disability status) (Wine et al., 2005).

Although there were three options in which the *Baccalaureate & Beyond: 93/03* follow-up interview could be administered (over the Internet, via the phone, or face-to-face), a single-web based instrument was designed and programmed (Wine et al., 2005). Regardless of how one was surveyed, multiple steps were taken to make sure that participants could respond to the same stimulus. For example, prompts provided to those who took the self-administered survey were similar to those available to the interviewers administering face-to-face and phone surveys. Interviewers utilized a laptop for both item administration and entry of respondents' data (Wine et al., 2005).

***Baccalaureate & Beyond: 93/03* data collection activities**. Administration of the *Baccalaureate & Beyond: 93/03* required the training of numerous types of data collection staff. These consisted of tracing specialists, supervisors and monitors, Help Desk agents, telephone interviewers, and field interviewers (Wine et al., 2005). Throughout the data collection process, a Help Desk was available to support respondents in answering questions and to provide assistance

in accessing and completing the survey. If respondents expressed difficulty about completing the survey, then the Help Desk agents encouraged participants to complete the survey over the phone at that time (Wine at al.).

After the initial 3-week web-interviewing phase, telephone interviews commenced. Specially-designed software was used to assign cases to interviewers, which allowed calls to be scheduled according to case priority and preferred time of day. This system also prevented calls to cases in progress online or to those that had been completed recently (Wine at al., 2005). The methodology was designed to make the data collection process as efficient and successful as possible.

Field interviews were begun 4 months after the beginning of telephone interviews. Thirty geographic areas with the greatest density of sample members were determined, and staff was hired to collect data from non-respondent cases located within a 50-mile radius (Wine et al., 2005). Once located, field interviewers completed surveys via a face-to-face or telephone format. Respondents were also still allowed to use the self-administered interview on the web.

***Baccalaureate & Beyond: 93/03* data collection outcomes.** Initially, a sample of 10,440 members was determined to be eligible to participate in the *Baccalaureate & Beyond: 93/03* survey. In comparison to the prior response rate status of the *Baccalaureate & Beyond: 93/97* follow-up, in 2003, 93.5% of respondents were located, and 86.3% completed the *Baccalaureate & Beyond: 93/03* interview (yielding a total of 8,970 participants). Again, this final follow-up was the first to utilize the web in order to administer the survey in a self-interview format. Though the majority of respondents completed the survey over the phone (56.5%), 38.2% completed it on the web, and only 5.3% required a computer-assisted face-to-face interview (Wine et al., 2005).

***Baccalaureate & Beyond: 93/03* data quality measures.** Several measures were used to evaluate the quality of the *Baccalaureate & Beyond: 93/03* survey instrument in three areas: usability, instrument effectiveness, and data collection efficacy (Wine et al., 2005). The concept of usability is defined as how easy it is for individuals to complete a task, while still able to attain the participants' identified goals. In using the *Baccalaureate & Beyond: 93/03* interview, the primary objective was for respondents to complete the instrument with convenience and ease. If such a tool as the one that was used were not deemed user friendly, then data quality would be affected negatively, leading to a decreased response rate and a greater amount of break-offs (i.e., users who discontinue the survey) (Wine at al.). After completing field tests with the *Baccalaureate & Beyond: 93/03* survey, modifications were made in the form of help text to clarify terms and response choices for participants on each web screen and the addition of methods to allow for expert coding of data (whether the survey was self-administered or done by an interviewer).

The second area of evaluation targeted the effectiveness of the *Baccalaureate & Beyond: 93/03* survey instrument during data collection. The completeness of data gathered was determined by analyzing the number of indeterminate responses and break-offs during administration of the *Baccalaureate & Beyond: 93/03* field test and full-scale instrument (Wine et al., 2005). As previously described, the *Baccalaureate & Beyond: 93/03* survey instrument could be self-administered, or completed through an interviewer on the phone or in person. When questions are self-administered, then there is a greater possibility that participants will not respond to questions, as there is not an interviewer present to promote a response as opposed to a nonresponse (Wine et al.). In order to combat this, the "don't know" and "refuse" choices of the field test were removed. Within the full-scale survey, participants could continue without

answering questions, but were prompted after three sequential nonresponses with a pop-up box to encourage responses. In addition, some choices were generalized into ranges (related to finances, disability status, employment status, and teaching), instead of specific responses to facilitate increased response rates. No significant issues with break-offs were identified.

The effectiveness of the *Baccalaureate & Beyond: 93/03* survey instrument was next evaluated by determining its stability (test-retest reliability). Response reliability was established by selecting a random subsample of 500 participants, with equal numbers selected of self and interviewer administered respondents (Wine et al., 2005). Thirty questions from the original survey related to education, employment, and finances were asked in a reinterview to determine temporal stability of items and were compared to original responses. The percent agreement of items in the full-scale survey ranged from 71 to 97%. It was determined that response reliability over time was good overall (Wine et al.). However, some items, especially those with the response "very important" were not found to be as reliable. Wine et al. noted that this may have been due to the delay in retesting, as some reinterviews were completed as soon as three weeks following the original interview, while others were as long as three months.

Finally, the last area in which data quality was assessed for the *Baccalaureate & Beyond: 93/03* survey was through the effectiveness of data collection design. The methods used to determine this were quality assurance monitoring and quality circle meetings (Wine at al., 2005). Quality assurance monitoring was achieved through examining phone interviews regularly in order to identify errors in delivery and data entry. Of the 10,640 items surveyed, there were only 115 errors in delivery and 66 data entry errors.

***Baccalaureate & Beyond: 93/03* data collection products.** According to Wine et al. (2005), the end products of *Baccalaureate & Beyond: 93/03* were:

A bibliography of publications using data for the B&B:93 cohort;

- Methodology reports that describe all aspects of the data collection effort;
- Restricted-use data files and documentation for research data users;
- A data analysis system for public access to the *Baccalaureate & Beyond: 93/03* longitudinal data, including the base-year interview, three follow-up interviews, and transcript abstraction;
- Special tabulations of issues of interest to the higher education community, as determined by NCES; and
- A descriptive overview report for the *Baccalaureate & Beyond: 93/03* data collection (p. 3).

A description of research design for the *Baccalaureate & Beyond: 93/03* follow-up study, including participants and procedure, was described in the methodology report by Wine et al. (2005).

Data Analysis

The data analyzed within my study was obtained and performed via DataLab (a set of tools on the NCES website), which allows public access to the longitudinal data collected from and mentioned above as a product of *Baccalaureate & Beyond: 93/03*.

The variables chosen as a focus in my study are those used by Perna (2004), as this was an extension of her earlier study. In addition, the examination of graduate enrollment patterns according to participants' SES is based on the findings of Walpole (2003). Traditionally, SES is defined as the social standing of an individual or group (American Psychological Association, 2014). It is measured via a combination of variables that include education, income, and occupation. Because of limitations in the data analysis tool utilized, SES is operationally defined

in this study only as a function of family income. In answering my research questions, the two dependent variables indicate whether or not the respondent enrolled in graduate program by 2003 and whether or not the respondent completed a graduate program by 2003. The independent variables include measures related to the traditional econometric framework (expected costs and benefits, financial and academic resources), cultural capital, social capital, gender, race/ethnicity, and SES.

Following Perna's (2004) methodology in order to determine the likelihood that cultural and social capital resources influence an individual's likelihood of attending graduate school, factors from a traditional econometric perspective were considered. The first of these independent variables includes expected costs and benefits. The cost of attending graduate school includes the direct costs of enrollment minus any financial aid and the opportunity cost of enrollment, which includes foregone earnings (Perna, 2004). However, because these are consistent for all graduates, direct costs for receiving a post-baccalaureate degree was not be included in the analyses. Thus, the first measure for expected costs and benefits is opportunity cost, and will be measured by starting salaries based on undergraduate major field of study. Other measures will include delaying college entry, the number of years needed to complete a bachelor's degree, marital status, and parental status. All of these variables are considered costly and might influence one's potential to pursue a post-baccalaureate degree (Perna, 2004).

The next group of variables is related to financial and academic resources. An assessment of the benefits and costs of graduate education includes review of one's financial status. This variable includes the income and dependency status of the individual (relative to his or her

parents). Academic resources are measured by academic achievement, including undergraduate grade point average and SAT/ACT scores (Perna, 2004)

Cultural capital and social capital include those factors that reflect an individual's value of graduate education (Perna, 2004). The two cultural capital variables measured in this study included parental educational attainment (the educational level of the participant's most-educated parent) and whether English is the most frequently spoken language in the home. Social capital includes the relationship of the respondent to his or her parents and the existence of other social networks that may promote graduate enrollment (Perna, 2004). In the current study, the aspect of social capital relative to one's parental involvement was measured through the monetary contribution an individual received for undergraduate education from his or her parents. The existence of other social networks that may encourage graduate enrollment includes Carnegie classification of the university, tuition, and location of the university attended. Carnegie classification and tuition are measures of institutional quality, while location of the institution is an indicator of the student's peer network (whether the institution is in the student's home state) (Perna, 2004).

Demographic information was used to compare characteristics of participants within the graduate enrollment and completion categories. Data analysis was performed through logistic regression, which was used to evaluate the influence of cultural capital and social capital on graduate school enrollment and completion after controlling for other variables through model building. Logistic regression and model-building was used to isolate the influence of the independent variables on the two dichotomous dependent variables (Dependent variable #1: *Respondent did not enroll or respondent enrolled in a master's, first-professional, or doctoral*

degree program and Dependent variable #2: *Respondent did not complete or respondent completed a master's, first-professional, or doctoral degree program*). See Table 6 for an explanation of that data and statistical analyses to be used for each of this study's research questions.

Table 6

Listing of Study's Research Questions, Including Data Used to Answer Each Question and the Statistical Procedures Used to Analyze Data

Research Question	**Data to be Utilized**	**Statistical Procedures**
1. Which variables relevant to cultural capital (i.e., parental educational attainment, whether English is the most frequently spoken language in the home) increase the likelihood that an individual will decide to attend and complete graduate school?	Cultural capital variables: • Parental educational attainment - HS graduate - Some post-secondary education (PSE), < 2 years - 2 or more years of PSE - Bachelor's degree - Advanced degree • Language most frequently spoken in the home 1992-93 - English - Other Traditional econometric variables: • Opportunity cost (starting salary based on field of study) • Delaying college entry • Number of years needed to complete an undergraduate degree • Marital status • Parental status (if participant is a parent) • Financial resources (income and dependency status) • Academic resources (undergraduate GPA and SAT or ACT scores)	Logistic regression Dependent variable #1: *Respondent did not enroll or respondent enrolled in a master's, first-professional, or doctoral degree program* Dependent variable #2: *Respondent did not complete or respondent completed a master's, first-professional, or doctoral degree program*
2. Which variables relevant to social capital increase the likelihood that an individual will decide	Social capital variables: • Monetary contribution an individual received for undergraduate education from parents (Total direct contribution from parents 1992-93)	Logistic regression Dependent variable #1: *Respondent did not enroll or respondent enrolled*

to attend graduate school?	- No contribution - < $1500 - $1501 to $3999 - $4000 to $7999 - > $8000 • Carnegie classification of institution (measure of institutional quality) - Research I - Other doctoral granting - Comprehensive I - Liberal Arts I • Tuition and fees for 1992-93 institution (measure of institutional quality) - < $1300 - $1301 to $2400 - $2401 to $5930 - > $5930 • Location of institution (indicator of student's peer network) - Parents live in state as bachelor's degree institution - Parents live out-of-state from bachelor's degree institution Traditional econometric variables (See above under Cultural capital variables).	*in a master's, first-professional, or doctoral degree program* Dependent variable #2: *Respondent did not complete or respondent completed a master's, first-professional, or doctoral degree program*
3. What are the graduate school enrollment and completion patterns of bachelor's degree completers by gender?	Demographic data	Percentage of enrollees and completers in each graduate program (master's, first-professional, and doctoral) by gender (male or female)
4. What are the graduate school enrollment and completion patterns of bachelor's degree completers by race/ethnicity?	Demographic data	Percentage of enrollees and completers in each graduate program (master's, first-professional, and doctoral) by race/ethnicity (American Indian/Alaska Native, Asian or

		Pacific Islander, Black, Hispanic, or White)
5. What are the graduate school enrollment and completion patterns of bachelor's degree completers from high SES and low SES backgrounds?	Demographic data: SES is based on total family combined income 1991 only Low SES = < $39999 Middle SES = $40000 to $79999 High SES > $80000	Percentage of enrollees and completers in each graduate program (master's, first-professional, and doctoral) by SES (low, middle, or high)
6. How do variables relevant to cultural capital influence graduate school enrollment among individuals from high SES and low SES backgrounds?	Cultural capital variables (See above)	Logistic regression among individuals from high and low SES backgrounds (Dependent variables #1 and #2)
7. How do variables relevant to social capital influence graduate school enrollment among individuals from high SES and low SES backgrounds?	Social capital variables (See above)	Logistic regression among individuals from high and low SES backgrounds (Dependent variables #1 and #2)

Chapter Four

Findings

The purpose of this study was to explore the influence of cultural capital and social capital on the decision of bachelor's degree recipients to enroll in graduate school and to persist to degree completion. Data were collected through the *Baccalaureate & Beyond: 93/03* longitudinal study (NCES) and analyzed using the DataLab system on the NCES website.

This study addressed the following research questions:

1. Which variables relevant to cultural capital (i.e., parental educational attainment, whether English is the most frequently spoken language in the home) increase the likelihood that an individual will decide to attend and complete graduate school?
2. Which variables relevant to social capital (parental financial support for undergraduate education, existence of social networks through Carnegie classification and tuition, and peer networks determined by location of the university) increase the likelihood that an individual will decide to attend and complete graduate school?
3. What are the graduate school enrollment and completion patterns of individuals by gender?
4. What are the graduate school enrollment and completion patterns of individuals according to race/ethnicity?
5. What are the graduate school enrollment and completion patterns of individuals from high SES and low SES backgrounds?

6. How do variables relevant to cultural capital influence graduate degree attainment among individuals from high SES and low SES backgrounds?
7. How do variables relevant to social capital influence graduate degree attainment among individuals from high SES and low SES backgrounds?

Research Question One

To address the first research question, "Which variables relevant to cultural capital (i.e., parental educational attainment, whether English is the most frequently spoken language in the home) increase the likelihood that an individual will decide to attend and complete graduate school?", the first logistic regression was run. This analysis was meant to determine which cultural capital variables significantly influenced a student's decision to enroll in a graduate degree program. The independent variable, parent attainment of post-secondary education (PSE), is a useful predictor for distinguishing between bachelor's degree completers' enrollment or non-enrollment in and completion or non-completion of graduate school. Results of the analysis are noted in Table 7. Parent educational attainment significantly influenced whether students enrolled in a graduate degree program. In determining the most influential cultural capital variables for bachelor's degree completers' graduate school enrollment, statistical significance was found among parent educational attainment indicators (i.e., a parent with two or more years of PSE [$p<.001$], a bachelor's degree [$p<.000$], or an advanced degree [$p<.000$]).

Bachelor's degree completers whose parent had more PSE were more likely to enroll in graduate school than bachelor's degree completers whose parent did not have PSE. The evidence for increased likelihood for graduate school enrollment based on parent educational attainment was expressed through the odds ratio calculated in the logistic regression. Participants whose parent had greater than two years of PSE were 1.412 times more likely to enroll in a

graduate program than those students whose parent had less than two years of PSE. Those participants whose parent had a bachelor's degree were 1.35 more times likely to enroll in a graduate program than those participants whose parent did not have a bachelor's degree, while those participants whose parent had an advanced degree were 2.201 times more likely to enroll in a graduate program than their peers whose parent had lesser degrees of educational attainment.

A significant (p=.034) and negative correlation was found for participants in which English was the language most often spoken in the home in 1992-93 (the year the participants graduated from their undergraduate institution). Hence, the likelihood of participants' enrollment in graduate school depended upon whether or not they resided in a home environment in which English was the language most often spoken. Those residing in a home in which English was not the most often spoken were .718 times more likely to enroll in graduate school than their counterparts residing in homes where English was the most often spoken language.

The second logistic regression was completed to examine the influence of cultural capital on student completion of a graduate degree. The results were similar to those seen in the first logistic regression. Refer to Table 7 for results. Statistical significance was established for the variables related to parental educational attainment, specifically a parent with two or more years of PSE (p=.003), a bachelor's degree (p<.000), or an advanced degree (p<.001). Thus, bachelor's degree completers with a parent who had at least two or more years of PSE were 1.561 times more likely to complete a graduate degree plan than their counterparts whose parent had less than two years of PSE. Participants whose parent had obtained a bachelor's degree were 1.557 times more likely to complete graduate school than those participants whose parent did not obtain a bachelor's degree. Bachelor's degree completers whose parent had attained an advanced

degree were 2.201 times more likely to have also completed a graduate degree than their counterparts with parents who had not attained an advanced degree.

As in the analysis with graduate enrollment, a significant (p=.047) and negative correlation were found for students in which English was the language most often spoken in the home in 1992-93. Consequently, the likelihood of participants' completion of a graduate degree was determined by whether or not they resided in a home environment in which English was the language most often spoken. Study participants residing in a home in which English was not the most often spoken were .685 times more likely to complete graduate school than their counterparts residing in homes where English was the most often spoken language.

Table 7

Logistic Regression Analysis of Highest Degree Program Enrolled in After Bachelor's Degree Program by 2003 and Highest Degree Attained by 2003 Based on Cultural Capital Variables (Parent's Highest Education and Language Most Often Spoken in the Home in 1992-1993)

Variable	Enrolled			Attained		
	B	SEB	e^B	B	SEB	e^B
Parent's Highest Degree Attained						
Some PSE, < 2 years	.028	.015	1.216	.027	.015	1.262
2 or more years PSE	.047**	.013	1.412	.050**	.016	1.561
Bachelor's degree	.061***	.016	1.350	.076***	.019	1.557
Advanced degree	.140***	.018	1.909	.121***	.016	2.201

HS graduate or equivalent (reference)

(Table 7 continued)

Language Most Often Spoken in Home						
English	-.039*	.017	.718	-.042*	.021	.685
Other (reference)						

*$p < .05$, **$p < .01$, ***$p < .001$

A third logistic regression was performed, through the use of model building, to determine the influence of cultural and social capital variables while taking traditional econometric measures into account. Results are presented in Table 8. Those variables that demonstrated statistical significance in the model, influencing graduate enrollment (E) and degree attainment (A) included:

- starting salary based on undergraduate major – lowest quartile (E);
- second and third quartile (E, A);
- time between college entry and bachelor's degree - < 4 years (E, A);
- marital status - not married (E, A);
- parental income and student dependency status – dependent with income >$70000 (A);
- undergraduate grades – mostly As (E, A), As & Bs (E, A);
- merged SAT and ACT scores – top quartile (A);
- parent educational attainment – advanced degree (E, A);
- Contribution from parents -$4000 to $7999 (A); this resulted in a negative correlation, which meant that participants whose parents had given them $4000 to $7999 to cover college expenses were significantly less likely to attain a graduate degree than those participants who parents did not contribute money towards their college costs, had contributed less than $1500, $1500 to $3999, or greater than $8000. Thus, those

participants who received direct contributions of amounts other than $4000 to $7999 were more likely to have attained a graduate degree;

- Carnegie classification – Research I (E, A), Other Doctoral Granting (A), Comprehensive I (A), Liberal Arts I (E, A); and
- tuition and fees for 1992-93 institution – 3rd quartile (E).

Table 8

Logistic Regression Analysis of Highest Degree Program Enrolled in After Bachelor's Degree Program by 2003 and Highest Degree Attained by 2003 Based on Undergraduate Major Recoded (Starting Salary), Delayed Enrollment between HS and PSE Entry, Time between College Entry and Bachelor's Degree, Marital Status at Bachelor's Degree Receipt, Number of Dependents (Excluding Spouse) 1992-93, Total Undergraduate Debt 1994, Income and Dependency Level 1991, Grades in Undergraduate Major 1994, Merged SAT and ACT Quartile, Cultural Capital Variables, and Social Capital Variables

Variable	Enrolled			Attained		
	B	SEB	e^B	*B*	SEB	e^B
Undergraduate Major (in percentiles according to starting salary)						
Lowest quartile	.063**	.022	1.430	.010	.025	1.070
Second quartile	-.016*	.023	.772	-.060*	.025	.733
Third quartile	-.113***	.028	.526	-.089**	.025	.563
Highest quartile (reference)						
Delayed Enrollment between HS and PSE entry						
No	.035	.018	1.339	.016	.014	1.136
Yes (reference)						

(Table 8 Continued)

Time between College Entry and Bachelor's Degree						
< 4 years	.131**	.042	1.842	.142**	.040	2.246
4 – 5 years	.045	.034	1.276	.030	.037	1.346
6 – 7 years	-.003	.026	.990	.002	.023	1.090
>7 years (reference)						
Marital Status at Receipt of Bachelor's Degree						
Not married	.086***	.018	1.718	.058**	.017	1.538
Married (reference)						
Number of Dependents 1992-93 (spouse not included)						
No children	-.027	.022	.760	-.013	.020	.853
Has 1 or more children (reference)						
Total Undergraduate Debt 1994						
< $4000	.014	.022	1.124	-.001	.022	.994
$4000 to $7999	.002	.019	1.008	-.007	.016	.925
$8000 to $12999	.017	.015	1.138	-.009	.020	.937
>$13000	-.009	.023	.947	.005	.022	1.049
No debt (reference)						

(Table 8 continued)

Income and Dependency Level of Student1991 (Parental financial support)						
Dependent with income < $30000	-.021	.029	.866	.005	.024	1.106
Dependent with income $30-50000	.004	.029	1.030	.037	.024	1.327
Dependent with income $50-70000	-.016	.031	.920	.006	.029	1.327
Dependent with income >$70000	.004	.031	1.018	.062*	.027	1.448
Independent, income $10-30000	-.018	.020	.921	-.017	.018	.780
Independent, income >$30000	.039	.020	1.851	.016	.023	1.434
Independent, income <$10000 (reference)						
Grades in Undergraduate Major 1994						
Mostly As	.149***	.021	2.423	.152***	.022	2.760
As & Bs	.105***	.115	1.772	.091***	.023	1.858
Mostly Bs	.047	.025	1.309	.038	.024	1.369
No higher than Bs and Cs (reference)						
Merged SAT & ACT Score Quartile (If no SAT score, then ACT score)						
Bottom quartile	-.034	.036	.805	-.033	.025	.763
Second quartile	-.012	.038	.949	-.014	.027	.939
Third quartile	.012	.043	1.261	.023	.032	1.176
Top quartile	.017	.043	1.573	.081**	.025	1.509
Did not take SAT or ACT (reference)						

(Table 8 continued)

Parent's Highest Degree Attained						
Some PSE, < 2 years	.047	.025	1.443	.029	.020	1.314
2 or more years PSE	.034	.020	1.310	.017	.021	1.188
Bachelor's degree	.033	.029	1.191	.030	.027	1.222
Advanced degree	.059*	.028	1.349	.074**	.026	1.511
HS graduate or equivalent (reference)						
Language Most Often Spoken in Home						
English	-.038	.024	.664	-.008	.021	.940
Other (reference)						
Total Direct Contribution from Parents 1992-1993						
< $1500	-.016	.023	.837	-.028	.021	.799
$1500 to $3999	-.006	.026	.959	-.028	.024	.825
$4000 to $7999	-.040	.021	.780	-.051*	.021	.710
> $8000	-.011	.033	.931	-.026	.030	.826
No direct contribution (reference)						
Carnegie Code 1992-93						
Research I	.099**	.015	1.681	.111***	.024	1.976
Other Doctoral Granting	.058	.035	1.385	.084**	.024	1.775
Comprehensive I	.069*	.033	1.422	.085***	.021	1.696
Liberal Arts I	.085**	.027	2.217	.069**	.025	2.054
Other (reference)						

(Table 8 continued)

Tuition and Fees for 1992-93 Institution						
Second quartile	.023	.019	1.147	.012	.023	1.036
Third quartile	.059*	.025	1.368	.037	.024	1.260
Highest quartile	.054	.027	1.328	.042	.030	1.278
Lowest quartile (reference)						
Parents Live in the Same State as Bachelor's Degree Institution 1994						
In state	-.005	.004	.988	.002	.018	1.036
Out of state (reference)						

*$p < .05$, **$p < .01$, ***$p < .001$

(Table 8 continued)

Number of cases	3900		3900	
-2 log likelihood & *df*	.099	44	.104	44
Pseudo R^2 (Cox & Snell)	.124		.113	

Research Question Two

The second research question considered the following: Which variables relevant to social capital (parental financial support for undergraduate education, existence of social networks through Carnegie classification and tuition, and peer networks determined by location of the university) influence the likelihood that bachelor's degree completers will decide to attend and complete graduate school?

Results of the fourth logistic regression, which established the influence of social capital variables, are listed in Table 9. The independent variables considered, total direct contribution from parents 1992-93, Carnegie code of institution (1992-93), and tuition and fees for 1992-93 institution, are valuable predictors for determining bachelor's degree completers' enrollment or

non-enrollment and completion or non-completion of a graduate degree program. For those participants enrolled in a graduate program, statistical significance (p=.045) was found among those students whose parental total direct contribution in 1992-93 was greater than $8000. Thus, those participants whose parents contributed greater than $8000 were 1.347 times more likely to enroll in graduate school than those participants whose parents provided less financial support.

Measures of institutional quality (Carnegie classification and tuition and fees for 1992-93 undergraduate institution) were statistically significant for Carnegie-classified Research I (p=.002) and Liberal Arts I (p=.011) institutions and for those institutions in which tuition and fees were in the second (p=.002) and third quartiles (p<.000). Accordingly, participants who attended a Research I institution were 1.6 times more likely to enroll in a graduate degree program than those students who did not. Similarly, the group of participants who attended a Liberal Arts I university were 1.876 times more likely to pursue graduate school enrollment than their counterparts who attended institutions with different Carnegie classifications. With regard to tuition and fees charged for the participants' undergraduate institutions, bachelor's degree completers whose college costs were in the second quartile ($6226 to $12451 per year) were 1.312 times more likely and those in the third quartile ($12452 to $18676) were 1.927 times more likely than their peers to enroll in graduate school.

The fifth logistic regression considered the relationship of social capital variables and the highest degree attained by participants by 2003. Similar to the logistic regression for enrollment, the variable measuring total direct contribution from parents in 1992-93 of greater than $8,000 was statistically significant (p=.020). Those individuals whose parents contributed more than $8000 towards their college expenses were 1.347 times more likely than those individuals whose

parents who provided a lesser degree of financial support to achieve the completion of a graduate degree.

The influence of Carnegie classification of Research I ($p<.000$), Other Doctoral Granting ($p=.008$), and Liberal Arts I ($p=.005$) classification variables and second ($p=.009$), third ($p<.000$), and highest quartile ($p=.037$) tuition variables were statistically significant. Hence, bachelor's degree completers who attended a Research I university were 2.144 times more likely, those who attended Other Doctoral Granting institutions were 1.567 times more likely, and those participants who attended a Liberal Arts I college were 1.986 times more likely to complete graduate school than the bachelor's degree completers in the study whose undergraduate institutions were assigned different Carnegie codes. Participants whose tuition and fees in 1992-93 were in the second quartile were 1.312 times more likely to complete graduate education than those who paid less than. The likelihood of participants with tuition costs in the third quartile and highest quartile (1.927 times and 1.976 times, respectively) to complete graduate school was significantly greater than those who paid tuition of the lowest quartile. Location of institution, a variable addressing the existence of peer networks, was not statically significant for the enrollment or degree attainment logistic regression analysis.

Table 9

Logistic Regression Analysis of Highest Degree Program Enrolled in After Bachelor's Degree Program by 2003 and Highest Degree Attained by 2003 Based on Total Directs Contribution from Parents 1992-93, Carnegie Code 1992-93, Tuition and Fees for 1992-93 Institution, and Parents Live in the Same State as Bachelor's Degree Institution 1994

Variable	Enrolled			Attained		
	B	SEB	e^B	*B*	SEB	e^B
Total Direct Contribution from Parents 1992-1993						
< $1500	.011	.017	1.069	.011	.017	1.084
$1500 to $3999	.029	.018	1.190	.024	.016	1.187
$4000 to $7999	.011	.015	1.074	.029	.016	1.233
> $8000	.047*	.023	1.305	.049*	.020	1.347
No direct contribution (reference)						
Carnegie Code 1992-93						
Research I	.099**	.030	1.600	.135***	.033	2.144
Other Doctoral Granting	.032	.025	1.178	.070**	.025	1.567
Comprehensive I	.004	.033	1.016	.040	.030	1.265
Liberal Arts I	.071*	.027	1.876	.067**	.023	1.986
Other (reference)						
Tuition and Fees for 1992-93 Institution						
Second quartile	.045**	.014	1.312	.045**	.016	1.372
Third quartile	.092***	.017	1.927	.120***	.019	2.342
Highest quartile	.333	.016	1.976	.044*	.020	2.381
Lowest quartile (reference)						

(Table 9 continued)

Parents Live in the Same State as Bachelor's Degree Institution 1994						
In state	-.017	.016	.922	-.022	.019	.894
Out of state (reference)						

*$p < .05$, **$p < .01$, ***$p < .001$

Research Question Three

The third research question used demographic data to answer the following: What are the graduate school enrollment and completion patterns of bachelor's degree completers by gender? In 2003, 27.2% of men and 34.2% of women were enrolled in master's degree programs However, more men than women enrolled in first-professional (6.4% versus 4%) and doctoral programs (6% versus 3.5%) than women. In considering graduate degree attainment, a similar trend was observed. The number of females awarded a master's degree in 2003 (21.2%) exceeded that of males (17.9%). Males completed first-professional and doctoral degrees at a higher rate than females. Within the 2003 sample, 4.9% of males and 3.1% of females completed a first-professional degree, while twice as many males (2.8%) as females (1.4%) attained doctoral degrees. Table 10 lists the results.

Table 10

Percent Graduate School Enrollment and Degree Attainment in 2003 by Gender

	Enrolled			Attained		
	Master's	First Prof.	Doctoral	Master's	First Prof.	Doctoral
Male	27.2%	6.4%	6%	17.9%	4.9%	2.8%
Female	34.2%	4%	3.5%	21.2%	3.1%	1.4%
Total	30.0%	5.1%	4.6%	19.7%	4.0%	2.0%

Research Question Four

The next question also used demographic data to explore the following: What are the graduate school enrollment and completion patterns of bachelor's degree completers according to race/ethnicity? Results are listed in Table 11. In considering highest graduate enrollment by 2003, students who were Black accounted for the most subjects in the sample pursuing a master's degree (35.8%), followed by Hispanic (34.8%), White (31%), American Indian/Alaska Native (25.7%), and Asian or Pacific Islander (22.7%). Among those students pursuing a first-professional degree, the group with the most subjects was the Asian or Pacific Islander group (13.8%), second was a tie between the American Indian/Alaska Native and Black groups (5.0%), and third was a tie between the Hispanic and White students (4.6%). For those students enrolled in a doctoral program, 4.1% were Asian or Pacific Islander, 3.3% were American Indian/Alaska Native, 2.9% were Hispanic, 2.2% were Black, and 1.8% were White.

Within the sample, the race/ethnicity group attaining the most master's degrees was Black (21.1%), followed by Hispanic (20.0%), White (19.8%), Asian or Pacific Islander (15.6%), and American Indian/Alaska Native (14.5%). Among those completing first-professional degrees, the group with the highest percentage was Asian or Pacific Islander (11.2%), White (3.6%), Hispanic (3.5%), Black (2.6%), and American Indian/Alaska Native (2.5%). Similar to that of the findings related to first-professional degree completion, Asian or Pacific Islanders attained the most doctoral degrees at 4.1%. The next largest group was the American Indian/Alaska Native at 3.3%. The last three groups were Hispanic (2.9%), Black (2.2%), and White (1.8%). Please refer to note at the bottom of Table 11 regarding error of estimates in some of the variables.

Table 11

Percent Graduate School Enrollment and Degree Attainment in 2003 by Race/Ethnicity

	Enrolled			Attained		
	Master's	First Prof.	Doctoral	Master's	First Prof.	Doctoral
American Indian/ Alaska Native	25.7%	5.0%!!	3.5%!!	14.5%!	2.5%!!	3.3%!!
Asian or Pacific Islander	22.7%	13.8%	7.2%!	15.6%	11.2%	4.1%!
Black, non-Hispanic	35.8%	5.0%	5.2%	21.1%	2.6%	2.2%!
Hispanic	34.8%	4.6%	5.4%	20.0%	3.5%	2.9%
White, non-Hispanic	31.0%	4.6%	4.3%	19.8%	3.6%	1.8%
Total	31.0%	5.1%	4.6%	19.7%	4.0%	2.0%

! Interpret data with caution as estimate is unstable because standard error represents >30% of estimate.
!! Interpret data with caution as estimate is unstable because standard error represents >50% of estimate.

Research Question Five

The fifth research question was: What are the graduate school enrollment and completion patterns of bachelor's degree completers from high SES and low SES backgrounds? Highest graduate enrollment in 2003 by degree type was determined through total family combined income in 1991.

Low SES was defined as $0-39,999, middle SES was $40,000-79,999, and high SES was represented by total family combined income of $80,000 or more. Results are listed in Table 12. Those students in the sample from the high SES group had the highest enrollment of master's (33.0%), first-professional (8.5%), and doctoral degrees (7.2%). The middle SES group had the second highest enrollment in all graduate degrees (master's=31.1%, first professional=5.7%, and

doctoral=5.2%), while the low SES group had the lowest percentage of enrollment in master's (28.5%), first-professional (3.6%) and doctoral (3.5%) degree programs.

The patterns of degree attainment among individuals from the three SES groups mirrored the results from that of graduate enrollment. Subjects from the high SES group had a greater percentage of attainment of master's, first-professional, and doctoral degrees (25.5%, 7.9%, and 3.5%). The middle SES group had the second highest percentage of the completion of master's (20.9%), first-professional (4.3%) and doctoral (2.3%) degrees. Students from the low SES groups had the lowest percentage of degree attainment, with 16.3% receiving master's degrees, 2.4% completing first-professional degrees, and only 1.4% receiving doctoral degrees. Refer to Table 12 for the listing of results.

Table 12

Percent Graduate School Enrollment and Degree Attainment in 2003 by SES Status

	Enrolled			Attained		
	Master's	First Prof.	Doctoral	Master's	First Prof.	Doctoral
Low SES	28.5%	3.6%	3.5%	16.3%	2.4%	1.4%
Middle SES	31.1%	5.7%	5.2%	20.9%	4.3%	2.3%
High SES	33.0%	8.5%	7.2%	25.5%	7.9%	3.5%
Total	30.0%	5.1%	4.6%	19.4%	3.9%	2.0%

Research Question Six

The sixth research question used logistic regression analysis to answer the following: How do variables relevant to cultural capital influence graduate school completion among bachelor's degree completers from high SES and low SES backgrounds?

Before considering the influence of cultural and social variables on graduate degree attainment among participants from high and low SES backgrounds, logistic regression was used to determine the influence of just SES on graduate degree attainment. Table 13 lists the results of this analysis. Graduate degree attainment among both the middle ($p = .003$) and high SES ($p < .000$) groups was statistically significant. Hence, bachelor's degree completers from a family with middle SES status were 1.606 times more likely to complete a graduate degree than those participants from families with low SES. Study participants from a high SES background were 2.474 times more likely to graduate from an advanced degree program than their counterparts from a low SES background.

Table 13

Logistic Regression Analysis of Highest Degree Attained by 2003 by SES Status

	B	SEB	e^B
Middle SES	.088**	.028	1.606
High SES	.166***	.027	2.474
Low SES (reference)			

**$p < .01$, ***$p < .001$

Next, logistic regression was completed to determine the influence of cultural capital variables among high and low SES groups. Results for both groups are listed in Table 14. This analysis was meant to determine which cultural capital variables significantly influenced a participant's completion of a graduate degree program among high and low SES groups. Similar to the results of the first logistic regression for the first research question, the independent variable, parent attainment of PSE, was a useful predictor for distinguishing between

participants' completion or non-completion of graduate school. Among the participants with high SES status, the only variable related to the parent's highest degree attained that was statistically significant was when a parent held an advanced degree (p=.009). Participants from high SES backgrounds whose parent had achieved an advanced degree were 2.186 times more likely to complete a graduate degree than those students from a high SES background whose parent had attained a lesser degree of PSE.

In addition, the results of the analysis determined a significant (p=.026) and negative correlation for students in which English was the language most often spoken in the home in 1992-93. Thus, the likelihood of high SES participants' completion of graduate school depended upon whether they resided in a home environment in which English was the language most often spoken. Those residing in a home in which English was not the most often spoken were .439 times more likely to enroll in graduate school than their counterparts residing in homes where English was the most often spoken language.

In considering participants with low SES status, two variables related to parent's highest degree attainment were significant: a parent had two or more years of PSE (p=.011) and a parent has an advanced degree (p=.001). Study participants whose parent had attended two or more years of PSE were 1.613 times more likely to graduate with an advanced degree than their counterparts whose parent had completed less than two years of PSE. Furthermore, participants whose parent had attained an advanced degree were 1.595 times more likely to complete graduate school than their low SES counterparts whose parent had not achieved an advanced degree. There was no statistical significance found among participants where English was the language most often spoken in the home in 1992-93 among the low SES group.

Table 14

Logistic Regression Analysis of Highest Degree Attained by 2003 Based on Cultural Capital Variables (Parent's Highest Education and Language Most Often Spoken in the Home in 1992-1993) for Participants with High and Low SES)

Variable	High SES			Low SES		
	B	SEB	e^B	*B*	SEB	e^B
Parent's Highest Degree Attained						
Some PSE, < 2 years	.013	.046	1.147	.013	.021	1.115
2 or more years PSE	-.008	.042	.911	.057*	.023	1.613
Bachelor's degree	.096	.061	1.634	.040	.023	1.285
Advanced degree	.177**	.065	2.186	.075**	.027	1.595
HS graduate or equivalent (reference)						
(Table 14 continued)						
Language Most Often Spoken in Home						
English	-.064*	.028	.439	-.025	.027	.810
Other (reference)						

*$p < .05$, **$p < .01$, ***$p < .001$

Research Question Seven

The last research question was: How do variables relevant to social capital influence graduate school completion among individuals from high SES and low SES backgrounds? Results of the analysis are listed in Table 15. No statistical significance was found among any of the social capital variables in the group of bachelor's degree completers with high SES status. However, among the participants with low SES status, several variables related to institutional quality were found to be statistically significant for graduate degree attainment: Carnegie-

classified Research I (p=.011) and Other Doctoral Granting (p=.018) institutions, and third (p=.013) and highest (p<.000) quartile for tuition and fees for 1992-93 institution.

In consideration of the Carnegie code independent variable, those participants who attended a Research I institution were 1.786 times more likely and the participants who attended an Other Doctoral Granting university were 1.614 times more likely to complete a graduate degree than bachelor's degree completers who attended other types of Carnegie-classified schools. Another independent social capital variable, tuition and fees for the 1992-93 institution, was a strong predictor of graduate degree completion among participants from low SES backgrounds. Bachelor's degree completers who attended an undergraduate institution in 1992-93 with third quartile tuition and fees were 1.473 times more likely to complete graduate school than those attending an institution with lower tuition and fees, while participants who attended undergraduate institutions in 1992-93 within the highest quartile of tuition and fees were 2.432 more likely to complete graduate school than their counterparts who attended institutions with lower costs.

Table 15

Logistic Regression Analysis of Highest Degree Attained by 2003 Based on Social Capital Variables (Total Directs Contribution from Parents 1992-93, Carnegie Code 1992-93, Tuition and Fees for 1992-93 Institution, and Parents Live in the Same State as Bachelor's Degree Institution 1994) for Participants with High and Low SES

Variable	High SES			Low SES		
	B	SEB	e^B	*B*	SEB	e^B
Total Direct Contribution from Parents 1992-1993						
< $1500	-.070	.071	.597	-.016	.019	.888
$1500 to $3999	-.069	.070	.634	.004	.026	1.031
$4000 to $7999	-.085	.086	.645	.000	.023	.996
> $8000	-.033	.095	.855	-.005	.024	.947
No direct contribution (reference)						
Carnegie Code 1992-93						
Research I	.044	.132	1.212	.091*	.034	1.786
Other Doctoral Granting	.015	.100	1.078	.075*	.031	1.614
Comprehensive I	-.026	.121	.868	.039	.033	1.244
Liberal Arts I	.063	.077	1.470	.057	.033	1.965
Other (reference)						
Tuition and Fees for 1992-93 Institution						
Second quartile	-.125	.068	.458	.042	.022	1.328
Third quartile	-.085	.054	.637	.057*	.022	1.473
Highest quartile	-.042	.051	1.470	.138***	.024	2.432
Lowest quartile (reference)						

(Table 15 continued)

Parents Live in the Same State as Bachelor's Degree Institution 1994						
In state	.006	.043	1.029	-.015	.024	.916
Out of state (reference)						

*$p < .05$, **$p < .01$, ***$p < .001$

Summary

The findings of this study revealed strong predictors of bachelor's degree completers' enrollment in graduate school and completion of a graduate degree. Research on the influence of cultural and social capital on a student's graduate school enrollment and completion of a graduate degree program should be of importance to higher education institution administrators and to policy makers. Methodology for this study was based on Perna's proposed model for studying college choice and access (2006). Variables related to cultural capital, social capital, and SES status were found to significantly influence the enrollment and completion of students in graduate degree programs.

The final chapter, Chapter Five, discusses this study's findings in greater depth, connects them to previous research, and establishes the implications of this study and its findings for the advancement of theory, to inform policy and professional practice, and to determine the direction of future research.

Chapter Five

Discussion

The purpose of this study was to determine the influence of cultural capital, social capital, and SES status (as defined as family income) on bachelor's degree completers' enrollment and *completion* of graduate degree programs. Prior to this study, similar research focused on the contribution of traditional econometric variables, such as expected costs and benefits, financial resources, and academic ability, on graduate *enrollment*. No research has focused solely on the influence of cultural and social capital variables on both graduate enrollment and completion. Instead of using cultural and social capital to merely improve the explanatory power of a traditional econometric model, these variables became the primary focus of the current research study in order to determine which specific cultural capital variables (parental educational attainment, whether English is the most frequently spoken language in the home) and social capital variables (parental financial support for undergraduate education, existence of social networks through Carnegie classification and tuition, and peer networks determined by location of the university) significantly influence the likelihood that an individual will pursue enrollment and completion of a graduate degree.

The study addressed the following research questions:

1. Which variables relevant to cultural capital (i.e., parental educational attainment, whether English is the most frequently spoken language in the home) increase the likelihood that an individual will decide to attend and complete graduate school?
2. Which variables relevant to social capital (parental financial support for undergraduate education, existence of social networks through Carnegie classification and tuition, and peer networks determined by location of the

university) increase the likelihood that an individual will decide to attend and complete graduate school?

3. What are the graduate school enrollment and completion patterns of bachelor's degree completers by gender?
4. What are the graduate school enrollment and completion patterns bachelor's degree completers according to race/ethnicity?
5. What are the graduate school enrollment and completion patterns of bachelor's degree completers from high SES and low SES backgrounds?
6. How do variables relevant to cultural capital influence graduate degree attainment among individuals from high SES and low SES backgrounds?
7. How do variables relevant to social capital influence graduate degree attainment among bachelor's degree completers from high SES and low SES backgrounds?

Findings and Interpretation

Cultural and Social Capital. According to Perna (2000), the purpose of including measures of cultural and social capital is to reflect a person's preferences and tastes for graduate education. A unique aspect of the current study was to focus specifically on the influence of cultural and social capital on graduate school enrollment *and* completion. Prior to my study, only a limited number of research studies had been conducted to explore the influence of cultural and social capital on graduate enrollment. A study by Perna (2004) was limited to utilizing data from bachelor's degree completers 4-5 years after graduating from college, and because of this short amount of time, only graduate enrollment was considered.

Results of the logistic regression analysis in this current study indicate a strong correlation between several cultural and social capital variables and the likelihood that students

in the sample enrolled in or completed a graduate degree program. The first measure of cultural capital in the regression was parent's highest education. In both the highest degree enrollment and attainment groups, parent education of greater than two years of PSE yielded a strong correlation with individuals' enrollment in or completion of graduate school. Students whose parent had attained a bachelor's or master's degree had a very strong likelihood of enrolling in and completing a graduate degree. Perna (2004) also found that parental educational attainment was a significant predictor of post-baccalaureate enrollment.

My findings are consistent with Perna's proposed model for studying college access and choice (2006), which demonstrates that an individual's habitus is based on the possession of cultural capital. More specifically, cultural capital includes cultural knowledge and the value of college attainment. Within the context of Bourdieu's Theory of Social Reproduction, cultural capital can be obtained through one's family and as a result of education (Bourdieu & Passeron, 1977; Winkle-Wagner, 2010). Thus, the results of my study demonstrate the importance of parents' possession of cultural capital, the transfer of it to their children, and their children's ability to convert it into educational success through the pursuit and completion of a graduate degree (Jaeger, 2009).

Because cultural capital is accumulated by an individual through the transmission of values via his or her parents and through educational credentials, I do not find it surprising that those individuals whose parent had attained greater degrees of PSE have a greater likelihood of graduate school enrollment. After all, those individuals have grown up in a home where PSE attendance was likely a given based on their parents' own educational experiences. Further, the process of successfully navigating higher education is much less intimidating when having a parent who can help through the process because he or she has already been through it. On the

other hand, for those students who are first-generation college-goers or even graduate students, the prospect of not having an experienced parent to lead the process has to be all the more challenging. If a parent does not even know where to begin, where does that leave the student in negotiating college choice? So many variables are influential in college and graduate school choice that even an individual with exceptional academic ability, high educational expectations, and who qualifies for adequate financial resources to attend college and graduate may get lost in the shuffle and not be able to realize his or her long-term educational and career goals. It is for this reason that despite the number of years that have elapsed since the data analyzed in this study were collected in 2003, the value of parents' transmission of cultural and social capital is still very relevant today, and will continue for many years into the future.

The second measure of cultural capital explored the influence of the language most frequently spoken in the home on graduate enrollment and completion. A significant but negative correlation was found, which indicated that students in which English was not the most often language spoken in the home were more likely to enroll in or attain a graduate degree than those who did (speak English most often in the home). This finding is substantiated by demographic results in this study, which indicated that participants in the sample who were Asian/Pacific Islander, Hispanic, or Black were more likely than students who were White to enroll in or complete a graduate degree program.

The significant and negative correlation result of this analysis was somewhat a surprise to me. Statistics available via NCES and current literature consistently report that there is still a gap that exists among non-majority students in their enrollment and completion of graduate degree programs, which was one of the primary reasons I chose to complete this study. I believe that all students, regardless of their gender, race/ethnicity, or SES status, should have equal access to all

levels of education, especially graduate education (where a significant gap still exists) and should be empowered with the resources that will help them succeed. In Chapter One, I presented two areas in which the existence of diversity would be beneficial: education and healthcare. I strongly believe that in these two areas and in all careers, individuals should encounter professionals who share similar backgrounds, whether the similarities are related to gender, race/ethnicity, or SES. Finally, our society can only benefit from the elimination of the underutilization of human potential.

In review of several research studies that utilized data from the *Baccalaureate and Beyond: 92/93* survey and its follow ups, though, the findings in my study are congruent in that participants in non-majority groups enroll in and complete graduate degree programs at a higher rate than majority (White) students. I speculate that this is because the sample size for non-majority students is small, which may skew the results as to whether non-majority students do attend and complete graduate school at greater percentages in comparison to majority students. Also, in some majority groups, such as Asian/Pacific Islander, there is a larger concentration of individuals (occurring at a greater incidence than U.S. population estimates) of this group that enrolls in and attains advanced degrees. Perhaps this group's pattern of enrollment and graduate completion may help to explain why the results are negatively correlated.

As stated in Chapter One, majority groups maintain their class status and power by marginalizing non-majority groups through cultural alienation and annihilation (Freeman, 2006). In the U.S., the primary method utilized by the dominant culture was via the transmission of education. Historically, non-minority groups in the U.S. were denied equal access to education (Freeman). Thus, non-majority groups with a smaller enrollment in bachelor's programs would certainly translate into an even smaller enrollment percentage at the graduate level.

Perna (2000) found that individuals who are not part of the dominant culture may feel the pressure to over perform in order to compensate for their less-valued cultural resources (i.e., pursue an advanced degree). In addition, Perna (2000) discovered that individuals from non-majority groups may receive fewer rewards for their educational investment. If a non-majority student feels that he or she may not receive the same benefits as a member of the dominant group for obtaining an undergraduate degree, he or she may feel compelled to attain a graduate degree. Freeman (1997) also found that African-American students expressed fear of not successfully obtaining a job that would be appropriate to the level of education attained following college attendance. The future monetary benefits of the completion of an undergraduate degree are greater for African Americans that for Whites and Hispanics (Perna, 2000). It is for all of these reasons that non-majority students may be more likely to believe that they need a graduate degree to break glass ceilings or to gain access to better paying jobs or employment with higher status. An individual with an advanced degree can realize personal gains, as well as greater professional opportunities and financial success, which can be a great motivator for a person from a non-majority group or from a low SES background (Nevill & Chen, 2007).

Another possible explanation for the significant but negative correlation result among those students where English is the most frequently spoken language in the home is the unique capital possessed by students where English is not the most frequent language spoken in the home. Yosso (2005) proposed a shift from the deficit view of minority students, suggesting that this population possesses different yet equally important forms of capital in comparison to forms of capital possessed by those individuals from the dominant majority group. Specific to this instance is the possession of linguistic capital. According to Yosso (2005), minority students may be able to speak more than one language or have experience in more than one

communication style. In some instances, such an individual may be the person solely responsible for translating for his or her family. Thus, the student gains positive benefits by developing enhanced intellectual, problem-solving, and social skills. It follows that linguistic capital may be converted into additional types of capital, including cultural or social capital, that may increase the likelihood of the student's enrollment and completion of graduate school. Yeung (2011) proposed similar thinking by emphasizing the valued experiences the children of immigrants gain when navigating and negotiating two different cultures (between their native culture and that of their adopted culture in the U.S.).

Social capital measures in the study included parental financial support for graduate education, existence of social networks through Carnegie classification and tuition (measures of institutional quality), and peer networks based on the location of one's college or university. In considering parents' financial support of graduation education, the only group with significant results was students whose parents had contributed greater than $8000 to their undergraduate education. This was found in both the enrollment and degree attainment groups. According to Hamilton (2012), parental financial support of education is an important influence in the "reproduction of advantage" (p .73), which is supported by the status attainment, human capital, and cultural capital models (Bourdieu's work). In her 2012 study, Hamilton found that parental investment in students' higher education was a very strong predictor of college completion. This concept supports the current study's findings. From a cultural capital perspective, the greater the parental investment, the more likely an individual will be to continue his or her PSE to enrollment and completion of a graduate degree.

I believe the practical side of having parents who financially contribute to one's graduate education expenses is that the individual then has more time to focus on the primary task at

hand—being successful in graduate study. Students with financial support do not have the worry associated with determining how they will secure their funds for tuition and living expenses. Also, students with adequate financial support from their parents would not have the distraction of having to work and pursue graduate studies at the same time. Additionally, the decreased anxiety from financial woes and increased time to pursue to graduate work without employment could lead to a better balanced life that allows for educational pursuits and much needed leisure time, resulting improved overall health and well-being.

Financial aid was not considered as a factor in this study, but it is important to consider the students who are typically underrepresented in graduate enrollment and attainment. Students who come from low income families or non-majority groups may lack the necessary resources to be able to pursue graduate studies or complete a graduate degree program based on the debt accumulated during their undergraduate experience.

Of all the social capital measures considered in this study, the most influential factors associated with social capital were the measures of institutional quality: Carnegie classification and tuition and fees for the student's 1992-93 institution. Those students who attended a Research I or Liberal Arts I college were more likely to enroll in a graduate program. This mirrored Perna's research, which found that Carnegie classification significantly influenced graduate school enrollment (2004). Participants in the sample who completed a graduate degree were more apt to have received their undergraduate degrees from a Research I, Other Doctoral Granting, or Liberal Arts I institution. Graduate enrollment and completion were also strongly correlated to the amount of tuition and fees charged at the university. Students who enrolled in a graduate program were likely to have attended institutions whose tuition and fees were in the second and third quartiles (totaling between $6226 to $12451 per year for the second quartile and

$12452 to $18676 for the third quartile). Participants who had attained an advanced degree were more likely to have paid tuition and fees in the second, third, and highest quartile (the highest quartile was $18677 to $24920 per year for tuition and fees). Thus, results suggest that attendance at a more selective college increases the likelihood that an individual will attend graduate school.

The current study had comparable findings to Eide, Brewer, and Ehrenberg's 1998 study. Using three sets of longitudinal data, Eide et al. (1998) concluded that students who attended elite private colleges were more likely to attend graduate school and were also more likely to do so at major research institutions. More recently, Zhang (2005) found that institutional quality was a strong predictor of graduate school enrollment and eventual degree attainment. In addition, students who graduated from high quality undergraduate institutions were more likely to attend high quality graduate institutions. Based on previous findings in higher education research, Zhang proposed that an established pattern exists in educational outcomes. One example was found in the examination of college graduation rates by Adelman (1999), who ascertained that the most significant predictor of baccalaureate degree completion was not institutional quality but the academic resources the student brought forward from secondary school into higher education. The academic resources consist of the intensity and quality of the student's high school. This phenomenon does not occur by chance. The quality of institutions at the previous level (high school) helped to determine the quality of the institution chosen at the next level (college or university), which also influenced the educational outcomes of the following level (graduate school) (Zhang, 2005). In addition, a quick review of the financial aid available at selective institutions reveals that scholarships are readily available based on merit. Thus, one

might conjecture that students with the academic resources to succeed at those universities are likely to succeed in graduate school.

Within Perna's proposed model for studying college access and choice, social capital consists of information about college and assistance with college processes (2006). Previous research on the influence of social capital on undergraduate college choice found that parent involvement in children's education and parental social networks are strong predictors of a student's college enrollment (Gonzalez, Stone, & Jovel, 2003; Pearce & Lin, 2005; Perna, 2000; Perna & Titus, 2005). Another key social capital transmitter is the student's peer network (Perna, 2006). Students whose peers plan to enroll in college are more likely to do the same (Hossler et al., 1999; Perna & Titus, 2005). In addition, student choice of a high quality institution was also strongly influenced by peers (Gonzalez et al., 2003). In considering the influence of social capital on college attendance, another important aspect is assistance with college processes (Perna, 2006). The individuals most important in aiding students in college processes are high school counselors and teachers. These individuals have been found to provide vital encouragement by presenting college attendance as a viable option to students and are significant in the student's decision of what PSE institution to attend (Gonzalez et al., 2003; Hossler et al., 1999; McDonough, 1997; Perna, 2000).

Social capital also plays an important role in one's decision to enroll in graduate school. Walpole (2003), in her research to determine college outcomes for students from high and low SES backgrounds, found that college investment variables, including peer contact and out-of-class interaction with faculty, increased the likelihood that low SES students later enrolled in graduate school. The findings of this current study (that institutional quality positively influences graduate enrollment attainment) suggest that the resources one gains via peers and faculty in

selective institutions lead to successful educational conversion strategies, as evidenced by increased attainment of graduate degrees by students with low SES (family income).

The importance of social capital in my findings supports DiMaggio's suggestion that EEC students have the most to gain from returns on cultural capital (1982). Further, Walpole (2011a) added that students can improvise, regardless of their backgrounds, in order to earn desired social and economic rewards. Habitus exists in two dimensions; it is both durable and transposable (Walpole, 2011a). The durable nature of habitus dictates that students from low SES backgrounds have low aspirations and are inclined to utilize less than optimal education strategies to reach their goals. The durable nature of habitus may also prevent low income students from embracing new, more successful habitus elements. Conversely, the transposable nature of habitus may allow individuals from low SES backgrounds to alter and update their values or habitus, especially in the college environment (Walpole, 2011a). In terms of habitus, it is for this reason that all students, even those from low SES backgrounds, can attain greater degrees of educational attainment after attending more selective institutions. Hence, programming and policy can help facilitate the development of a new habitus early in one's school career (even prior to high school).

Following the exploration of the influence of cultural and social capital on graduate school enrollment and degree completion, an additional analysis was completed to determine if cultural and social capital variables remained significant when taking traditional econometric variables into account. In order to achieve these results, model building was performed via logistic regression. Even with addition of the traditional econometric variables, one of the cultural capital variables (parents' educational attainment of an advanced degree for both graduate degree enrollment and attainment) and some of the social capital variables (Carnegie

codes – Research I, Other Doctoral Granting, Comprehensive I, and Liberal Arts I and Tuition and fees for 1992-93 institution – 3rd quartile) were still found to be statistically significant.

Thus, I believe that the significance of my findings relevant to the influence of cultural and social capital variables in determining graduate enrollment and completion is important and should be pursued in future research. The influence of cultural capital and social capital is greater than simply improving the explanatory power of the traditional econometric model.

Graduate Enrollment and Completion Patterns

Gender. Consistent with earlier literature, the results demonstrated that women are more likely than men to enroll in and complete master's degrees, while men enrolled at the graduate level and attained first-professional and doctoral degrees at a higher rate than women. Perna (2004) explained that the increased female enrollment in master's programs was related to college major (women receiving bachelor's degrees in fields with the lowest quartile salaries were more likely than females with salaries in the highest quartile to register in a master's program) and academic resources (e.g., undergraduate GPA, as it was found that the likelihood of enrolling in a master's program increased when an individual had a B average or above in undergraduate studies, and women were more likely than men to have higher GPA's). Perna (2004) proposed three reasons for gender differences in the enrollment in first professional programs, which included college major (majoring in a field in the lowest quartile of starting salaries was found not to promote enrollment in first-professional programs among women), academic resources (more men than women took the SAT or ACT, and men's higher scores on these exams increased the probability of enrollment in first-professional programs), and Carnegie classification of the participants' undergraduate institution (women's decreased undergraduate

degree attainment from a Research I institution increased the likelihood that that women would enroll in a first-degree professional program).

However, in recent years, women have made progress toward closing the gap between them and their male counterparts in the attainment of graduate degrees. According to U. S. Census data, women have attained a greater percentage of degrees in all levels of education, except in the first-professional category (males have a higher number of first-professional degrees, but only by a small margin). Still, there is potential to maintain this progress.

Bowen and Rudenstine (1992) contend that the attainment of graduate degrees by women is heavily weighted by field of study. So, in addition to maintaining the progress females have made in closing the gap between them and their male counterparts in graduate degree attainment, I believe there should continue to be a drive toward steering women to pursue degrees in the areas most frequently dominated by men (basic sciences, first-professional degrees, business, etc.). The playing field will not be leveled until women have equal access in all professions.

Race/Ethnicity. Similar to other researchers using the 2nd and 3rd follow-ups to the *Baccalaureate & Beyond: 92/93* study (Perna, 2004; Xu, 2012; Zhang, 2005), results of the current study demonstrated that non-majority group participants in the sample (i.e., Asian/Pacific Islander, Black, Hispanic, and American Indian/Alaska native) enrolled in and completed graduate degree programs at an increased rate compared to those participants who were White. As indicated in the findings in Table 11, there may be some error in variable estimates. The breakdown of the participants by race/ethnicity in the *Baccalaureate and Beyond: 93/03* sample were as follows: White = 83.6%, Black = 6.0%, Hispanic = 5.1%, Asian or Pacific Islander = 4.8 %, and American Indian/Alaska native = .5% (Choy et al., 2008). Thus, the validity of the estimates of graduate degree completion may be compromised by the small sample size.

Though the results of recent U.S. Census data (2012) demonstrate yearly progress in the number of non-majority individuals achieving advanced degrees, a gap still exists in terms of educational outcomes (i.e., admission to prestigious universities and graduate schools, degrees obtained) in non-majority groups versus students who are White (Walpole, 2007a). There is much work to be done in making sure students from all racial and ethnic groups have equal access to education and have both the potential and the adequate resources to achieve successful educational outcomes through graduate degree attainment.

SES. As in previous studies (Walpole, 2003, 2007), participants with higher SES status (family income) enrolled in graduate programs and attained graduate degrees at much higher percentages than those students with low SES status. For all advanced degree types, master's, first-professional, and doctoral, students with high SES (family income) have the highest percentage of enrollment and completion Similarly, students from a middle SES background had a higher percentage of enrollment and completion of graduate programs than those from low SES backgrounds. In addition, logistic regression analysis demonstrated a moderately statistically significant result for middle SES students' attainment of a graduate degree and a very strong statistically significant result for high SES students' attainment of a graduate degree.

Influence of Cultural and Social Capital and SES on Graduate Degree Attainment

The last two research questions explored the effects of cultural and social capital variables on graduate degree attainment among students from high and low SES (family income) backgrounds. Within the high SES group, statistical significance was found for the cultural capital variable related to parent educational attainment. Specifically, participants whose parent had achieved an advanced degree had a moderately high likelihood of also attaining an advanced degree. Also among high SES status students, there was a significant but negative correlation

with language being the most often spoken in the home in 1992-93. As explained previously in the first section of results considering only cultural capital variables, participants in the sample from non-majority race/ethnic groups were found to have enrolled in advanced degrees at a higher rate than White students, which might explain these results.

There were two significant findings in the variables related to cultural capital among students in the low SES (family income) group. Low SES students with a parent who completed two or more years of PSE or an advanced degree had a greater likelihood of attaining a graduate degree. These findings illustrate that despite being from a low SES background, cultural capital gained from one's parents can be an important influence in one's pursuit of graduate studies. Perna (2006) suggested that parental educational attainment might be a proxy to cultural knowledge and values about higher education. Parent's educational attainment was found to increase the likelihood that a student would attend a 2- or 4-year PSE institution (Perna & Titus, 2005) and pursue a graduate degree (Perna, 2004, Xu, 2012; Zhang, 2005).

The findings related to cultural capital demonstrate the importance of this type of capital to Perna's proposed model for studying college access (2006) and provide evidence that this model may also be appropriate for explaining student choice in graduate school enrollment. Further, the pattern of parent educational attainment and its positive effect on children's successful educational outcomes supports Bourdieu's Theory of Social Reproduction (Horvat, 2003; Winkle-Wagner, 2010). Bourdieu (1986) believed cultural capital to be the resource that allowed individuals from any background to gain access to power. Thus, it would follow that even students from low income families can overcome the disadvantage they have been dealt in the educational system, as their parents' knowledge acquired via educational attainment helps to level the playing field.

The results of the current study did not reveal significant factors that impacted graduate degree attainment related to high SES (family income) and social capital. However, there were significant findings related to participants with low SES and social capital (i.e., institutional selectivity). Students from a low SES background who attended institutions with a Carnegie classification of Research I or Other Doctoral Granting were more likely to achieve a graduate degree. Though SES is a strong predictor of graduate enrollment and attainment, the results of this study provide evidence that students from low SES (family income) backgrounds can use their social connections while attending more selective institutions to achieve upward mobility. It is these students that have the most to gain through active participation in high-status cultures (DiMaggio, 1982; Lamont & Lareau, 1988). Thus, students who may enter the educational system with low status capital really can convert their educational credentials and convert the social capital gained via the attendance of selective institutions into high status capital.

Implications for Theory

As discussed in the findings and interpretations above, the results of this study provide strong evidence for the continued use of Perna's proposed model of studying college access and choice (2006) and should be the framework used in designing future studies on undergraduate and graduate enrollment and degree attainment. Though most research completed thus far focuses on the habitus (first) layer of the model, it is vital for those in higher education to explore the school and community context, the higher education context at the institutional and systems level, and social, economic, and policy characteristics. With continued research in the area of graduate school choice, there is potential for the model to be modified to predict the unique needs of bachelor's degree completers in their decision-making to pursue and complete advanced degrees.

Recommendations for Policy Makers and Practitioners

The reality of higher education is that there still remains a gap in graduate school enrollment and degree attainment between non-majority groups (according to gender, race/ethnicity, and SES). If policymakers and practitioners (i.e. faculty, counselors, and administrators at all levels of education, from elementary to PSE) continue to support the status quo, thereby impeding non-majority student attainment of graduate education, then the "academically and socioeconomically 'rich, (will) become richer while the academically and socioeconomically 'poor' become poorer in the face of massive expansion of higher education in the United States" (Zhang, 2005, p. 24). If this cycle is perpetuated, then human potential will continue to be underutilized, and individuals and society will not realize the benefits a more educated culture can produce (Freeman, 2004, 2006; Neville & Chen, 2007).

There are several implications for policy makers and practitioners based on the findings of the current research study. First, the study's results have the potential to increase the awareness of educators regarding the norms and expectations related to the types of cultural and social capital that are present or absent at their institutions. Second, it is important to start policy changes and focus efforts on transforming areas in need of change, such as enrollment patterns of students from non-majority groups in college and in graduate school, versus focusing efforts and expending resources to examine factors that cannot be changed (e.g., gender and race/ethnicity). Third, research findings over the last several years indicate that the college choice process begins as early as middle school (Kinzie et al., 2004), so community/educational institutions should begin to create a culture of helping parents and students to gain the necessary resources to prepare for this process. Last is the importance of realizing the long-term effects of current

economic decisions in higher education, such as decreased state and federal funding and the transference of the burden of college expenses to students and their families.

The results of this study are important to assisting practitioners in becoming more aware of the beliefs and values related to the cultural and social capital present at their schools. Because our education system reflects the ideals set forth by the dominant class, students from the dominant class are likely the ones who enter the system with the essential social and cultural cues (Lamont & Lareau, 1988). Thus, it is important to understand how and why we reward students whose behaviors and dispositions reflect a certain habitus and taste, and why we find other students' habitus and taste less appropriate for the educational setting (Winkle-Wagner, 2010). If teachers, counselors, and administrators have the capability to influence cultural and social capital, then they should be aware of how to do so in a positive way and how to make sure that those students who are "disadvantaged" and without certain resources have or gain access to what they need in order to improve their ability to be successful in college degree attainment and matriculation to and completion of graduate programs.

Perna (2000) found that measures of social and cultural capital improved the explanatory power of the traditional econometric model in determining predictors of college enrollment. This study's results demonstrated that cultural capital and social capital can positively influence graduate school enrollment and degree attainment. Though previous research has been essential in exploring strategies to increase the enrollment of students comprising non-majority groups in college and in graduate school, the second implication of this study is that it is imperative to begin conducting research that establishes solutions in areas that we can change, instead of individual characteristics we cannot (e.g., gender, race/ethnicity, and SES).

Because parents play a crucial role in the transmission of cultural and social capital to their children, it is important that policies and practices are developed to make sure that those parents who have not attained a college or graduate education are prepared to help their children to do so. Cultural capital is transmitted to children from their parents and is utilized to maintain class status or to facilitate upward mobility. The cultural capital of greatest importance to a college-bound student is knowing what college is, realizing the diversity of institutions, completing the application process successfully, realizing the graduation rates of various types of institutions, and understanding the conversion capacity of the different types of degrees available (McDonough et al., 1997). Results of this study provide evidence that bachelor's degree completers whose parents had a attained a college or graduate degree were more likely to enroll in and complete graduate school than the children of parents who has lesser degrees of educational attainment.. Thus, it is unlikely that parents who have not participated in college choice activities will have the adequate resources to help their children navigate these processes.

As mentioned previously, the formulation of college plans can begin as early as middle school (Kinzie et al., 2004). Hossler et al. (1999) found that after graduating from high school, 60% of students had followed through with plans that were formulated when they were in the ninth grade. It pays to start the preparation of parents and students for PSE early.

One way this information could be provided early on is through parenting centers. Resources should be available to parents and students (when developmentally appropriate) throughout elementary and high school. Teachers, counselors, and administrators should take primary responsibility for providing this information. Because difficulty in college access is greatest among those students who are first-generation, of low SES, from rural areas, or from

non-majority groups, these individuals should receive priority in the provision of this information (McDonough, McClafferty, & Fann, 2002).

More recently, deep budget cuts have decreased the amount of federal and state appropriations to colleges and universities across the U.S. In order to survive this change in funding, the burden of college expenses has been shifted to students and their parents (Hamilton, 2012). It is vital that policy makers consider the long-term effects of these actions to determine if college and graduate school access will be even further removed from non-majority students, and how decreased resources will affect the quality of the educational outcomes for those students who can still manage to afford it.

Limitations

There are several limitations associated with the current study. One limitation of the present study is that 10 years may not be an appropriate or long enough period of time to get an accurate picture of the enrollment patterns of college undergraduate completers from the 1992-93 academic year. Depending on a wide variety of factors, students might delay graduate enrollment for many years following the completion of their bachelor's degrees. According to data from the National Science Foundation (NSF), the median number of years required to complete the doctoral degree post-bachelor's in 2001 ranged from 7.7 years in the physical sciences to 19.0 years in education (NSF, 2012). Because of this, participants who have decided to delay graduate school or those that work on graduate degrees part-time while employed are not included in this study.

However, my study assumed that 10 years of data would yield a greater number of participants who had both enrolled in and completed graduate degree programs in order to have a larger sample size. By 1997, 9.6 % of participants in the *Baccalaureate & Beyond: 93/03* study

had attained a master's degree, and 1.9% had completed a first-professional or doctoral program (Choy et al., 2008). In comparison, the 2003 follow-up of the *Baccalaureate & Beyond: 93/03* revealed that 20.2% of participants had attained a master's degree, while 5.9% had attained a first-professional degree or doctorate. The number of participants that attained a master's degree within the 10 years since the study began more than doubled, and those attaining first-professional/doctoral degrees almost tripled.

Next, it is important that all aspects of Bourdieu's theory of social reproduction be considered and defined in studying cultural and social capital, including field, habitus, and taste. However, in using a large dataset for this study, a limitation might be that there is a lack of understanding among researchers with regard to how habitus and field exist within the setting being studied in order to realize what gives cultural capital its value and its meaning (Winkle-Wagner, 2010). Statistically significant findings were obtained when focusing on just cultural and social capital variables and their influence on graduate school enrollment and completion. The scope of this study did not allow for the inclusion of habitus and field. In order to substantiate these results, logistic regression was performed, through the use of model building, to determine the influence of cultural and social capital variables while taking traditional econometric measures into account. Within this analysis, the variables measuring cultural and social capital were still statistically significant.

Another limitation is the generalization of findings to future college graduates. The sample members in the study (college graduates in the 1992-93 academic year) are part of Generation X. Many members of this generation (born 1965-1979) had divorced parents and mothers who worked outside of the home and thus, were latchkey kids (Hart, 2008). Because of their family dynamics, individuals from Generation X are believed to be more resilient,

independent, and flexible than previous generations. Work is taken seriously by Generation Xers, and this generation has a more evenhanded approach to completing job tasks. Unlike the their workaholic parents, members of Generation X strive to have a greater life balance, and transition in and out of the workforce to accommodate their family and children (Hart, 2008).

Millennials, those individuals born during 1977-1998 (Howe & Strauss, 2000; Thielfold & Scheef, 2004), are considered to be a much different generation, perhaps possessing different types of cultural and social capital. The findings of this study may not be appropriate or generalizable to these and future generations. Millennials, as compared to previous generations, comprise a larger number of individuals, are wealthier and better educated, and represent greater ethnic diversity (Howe & Strauss, 2000). Though young, Millennials possess various positive social habits: collaboration, achievement, humility, and respectable conduct. As a group, they have been described as optimistic, upbeat, and engaged (Howe & Strauss, 2000). This generation has grown up with technology as a critical aspect of life. Millennials are the children of Baby Boomers, who pampered them and gave them a lot of attention (Hart, 2008). To Millennials, work is a place, not a major part of their identity, and these individuals will easily leave a job if it does not meet their expectations. For these multiple reasons, generalizing the effects of cultural and social capital to better understand Millenials' educational experiences based on generational differences related to child-parent relationships, peer networks, and online/social media use is a major limitation of this study.

Over the years, multiple studies have been conducted to explore the influence of different types of variables on undergraduate and graduate enrollment and completion. Though groups of students may display unique and diverse generational characteristics, there is strong evidence

that parental educational attainment is a significant predictor of an individual's likelihood to attend college and graduate school. This is a reality that is unlikely to change anytime soon.

Suggestions for Future Research

The results of the current study offer many options for future research. Because logistic regression analysis is limited to only dichotomous variables, it is recommended that a follow-up study be completed on the same data set, *Baccalaureate & Beyond: 93/03*, in order to determine significant trends related to specific degree programs (i.e., master's, first-professional, and doctoral) among members of this sample. In order to provide evidence for the application of Perna's proposed model of student choice (2006) to graduate school choice and to further strengthen Bourdieu's Theory of Social Reproduction, a replication of Perna's 2004 study should be performed. Morrison et al. (2010), Rand and Wilensky (2006), and Darley (2000) have all successfully argued the need for and importance of replication studies outside of the natural sciences. Replication of Perna's previous study (2004) with the *Baccalaureate & Beyond: 93/03* data and the addition of Walpole's concepts regarding the importance of the influence of SES on graduate enrollment and completion will help to certify that the results of previous and current studies are valid and reliable, are able to be generalized and applied to real world situations, and can help to inspire further research (Heffner, 2004). In addition, the richness of data collected via the *Baccalaureate & Beyond: 93/03* study provides great potential for studying the many factors that influence one's educational and career path over time. It can provide valuable information to shape theoretical and practical strategies in the evolution of higher education in this country.

Additional replication studies on the influence of cultural capital, social capital, and SES on graduate enrollment and degree attainment should be performed on more recently collected large longitudinal data sets. The NCES (n.d.) has begun collecting data on two additional cohorts

through the *Baccalaureate & Beyond Longitudinal Study*, which would be an appropriate next step for future research. Also, future studies should concentrate on all four layers of Perna's proposed model for studying college access and choice (2006). In order to appropriately determine the model's generalizability to graduate school choice, then all aspects of the model should be considered in ordered to clearly verify its utility among this population.

Historically, there has been no one accepted definition for cultural capital. Thus, Winkle-Wagner (2010) determined that future research concerning cultural capital should include a mutually accepted definition of the concept and that the methodology the researcher chooses should match this description. The primary issue is that researchers have not precisely defined cultural capital, but have linked it to the available data in their studies. In previous quantitative and qualitative studies, available data have not considered Bourdieu's theory holistically. These datasets should have comprehensive measurements that relate appropriately to the concepts of cultural capital, habitus, field, and social capital (Winkle-Wagner).

Following several studies on college graduates and their pursuit of further education, there appears to be a need for new and more appropriate measures of cultural and social capital (Perna, 2004; Walpole, 2003; Xu, 2013; Zhang, 2005). There is annual progress among non-majority groups in the attainment of bachelor's and master's degrees, so those students do possess various types of capital that they have converted successfully to achieve positive educational outcomes. Several types of capital, such as those described through the explanation of oppositional culture (Fordham & Ogbu, 1986), complementary culture (Pearce & Lin, 2005), and critical race theory (Yosso, 2005), should be explored via qualitative methodology to determine which are of true influence to different student groups in college and graduate school

choice. Newly identified valid and reliable variables could then be included in future longitudinal data collection for research.

In addition, several researchers have argued that too much generalizability among traditional non-majority groups (Black, Hispanic, Asian/Pacific Islander) does not allow for a true sense of the unique characteristics and types of capital possessed among individuals within the group (Immerwhar, 2003; Teranishi et al., 2004). Thus, future studies should explore the unique features of specialized groups.

Simply because not many studies have been done to determine the path one takes to graduate school, qualitative, exploratory studies could also be conducted with individuals from different gender, race/ethnicity, SES, and disciplinary groups who have completed graduate degrees. These findings could also be used to inform future longitudinal studies. As an academician, I frequently ask colleagues about their journey to graduate school. In hearing their stories, many consider themselves "outliers" whose path has deviated substantially from that of typical graduate students. These individuals may be an interesting group to pursue via qualitative inquiry.

References

Adelman, C. (1999). *Answers in the tool box: Academic intensity, attendance patterns, and bachelor's degree attainment*. Washington, DC: U.S. Department of Education.

American Psychological Association. (2014). *Socioeconomic status.* Retrieved from http://www.apa.org/topics/socioeconomic-status/

Antonio, A. (2003, November/December). Diverse student bodies, diverse faculties [Electronic version]. *Academe, 89*(6), 14-18. Retrieved from Academic Search Premier database (EBSCOhost).

Brown, W. G., & Rudenstine, N. L. (1992). *In pursuit of the Ph.D.* Princeton, NJ: Princeton University Press.

Bernard Hodes Group. (2003). *The PhD project, student survey report.* Retrieved from http://www.phdproject.com

Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (241-258). New York, NY: Greenwood.

Bourdieu, P., & Passeron, J. (1977). *Reproduction in education, society, and culture.* Beverly Hills, CA: Sage.

Choy, S. P., Bradburn, E. M., & Caroll, C.D. (2008). *Ten years after college: Comparing the employment experiences of 1992-93 bachelor's degree recipients with academic and career-oriented majors.* Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2008155

Darley, W. (2000). Status of replication studies in marketing: A validation and extension. *Marketing Management Journal, 10*(2), 121-132.

DiMaggio, P. (1982). Cultural capital and school success: The impact of status culture participation on the grades of U.S. high school students. *American Sociological Review, 47*(2), 189-201.

Eide, E., Brewer, D. J., & Ehrenberg, R. G. (1998). Does it pay to attend an elite private college? Evidence on the effects of undergraduate college quality on graduate school attendance. *Economics of Education Review, 17*(4), 371-376.

Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the burden of 'acting' white. *The Urban Review, 18*(3), 176-206.

Freeman, K. (1997). Increasing African Americans' participation in higher education: African American high-school students' perspectives [Electronic version]. *Journal of Higher Education, 68*(5), 523-550. Retrieved from http://www.jstor.org/stable/2959945

Freeman, K. (2004). Looking at and seeing possibilities: The compelling case for the use of human potential [Electronic version]. *Comparative Education Review, 48*(4). Retrieved from http://www.jstor.org/stable/10.1086/423362

Freeman, K. (2006). "If only my eyes were different": The loss of identity and the under-utilization of Black children's educational potential—Rethinking social justice and assimilation. Retrieved from Academic Search Premier database (EBSCOhost).

Gonzalez, K. P., Stone, C., & Jovel, J. E. (2003). Examining the role of social capital in access to college for Latinas: Toward a college opportunity framework. *Journal of Hispanic Higher Education, 2*: 146-170.

Hamilton, L. T. (2012). More is more or more is less? Parental financial investments during college. *American Sociological Review, 78*(1), 70-95. doi: 10.1177/0003122412472680.

Hart, J. (2008). Understanding today's learner. Retrieved from http://www.learningsolutionsmag.com/articles/80/

Heffner, C. L. (2004). Replication. Retrieved from http://allpsych.com/researchmethods/replication.html

Horvat, E. M. (2003). The interactive effects of race and class in educational research: Theoretical insights from the work of Pierre Bourdieu. *Perspectives on Urban Education*, *2*(1), 1-25. Retrieved from www.urbanedjournal.org

Hosmer, D. W., & Lemeshow, S. (1989). *Applied logistic regression.* New York: Wiley.

Hossler, D., Braxton, J., & Coopersmith, G. (1989). Understanding student college choice. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. V, pp. 231-288). New York, NY: Agathon Press.

Hossler, D., & Gallagher, K.S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. *College and University*, *2*(3), 207-221.

Hossler, D., Schmit, J., & Vesper, N. (1999). *Going to college: How social, economic, and educational factors influence the decision students make.* Baltimore, MD: John Hopkins University Press.

Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation.* New York, NY: Vintage.

Immerwahr, J. (2003). *With diploma in hand: Hispanic high school seniors talk about their future.* Retrieved from http://www.highereducation.org

Internal Revenue Service. (2012). Taxation of nonresident aliens. Retrieved from http://www.irs.gov/Individuals/International-Taxpayers/Taxation-of-Nonresident-Aliens

Jaeger, M. M. (2009). Equal access but unequal outcomes: Cultural capital and educational choice in meritocratic society [Electronic version]. *Social Forces, 87*(4), 1943-1972. Retrieved from Academic Search Complete database (EBSCOhost).

Kane, J., & Spizman, L. M. (1994). Race, financial aid awards and college attendance: Parents and geography matter. *American Journal of Economics and Sociology, 53*, 73–97.

Kinzie, J., Palmer, M., Hayek, J., Hossler, D., Jacob, S. A., & Cummings, H. (2004). *Fifty years of college choice: Social, political, and institutional influences on the decision-making process.* Retrieved from http://www.luminafoundation.org/publications/Hossler.pdf

Kraaykamp, G., & van Ejick, K. (2010). The intergenerational reproduction of cultural capital: A threefold perspective. *Social Forces, 89*(1), 209-231. doi:10.1353/sof.2010.0087

Lamont, M., & Lareau, A. (1988). Cultural capital: Allusions, gaps, and glissandos in recent theoretical developments [Electronic version]. *Sociological Theory, 6,* 153-168. Retrieved from Academic Search Complete database (EBSCOhost).

Loft, J. D., Riccobono, J. A., Whitmore, R.W., Fitzgerald, R. A., Berkner, L. K., & Malizio, A. G. (1995). *Methodology report for the National Postsecondary Student Aid Study, 1992-93.* Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=95211

McDonough, P. M. (1997). *Choosing colleges: How social class and schools structure opportunity.* New York, NY: SUNY Press.

McDonough, P. M., Antonio, A. L., & Trent, J. W. (1997). Black students, black colleges: An African American college choice model. *Journal for a Just and Caring Education, 3*(1), 9-36.

McDonough, P. M., McClafferty, K.A., & Fann, A.J. (2002, April). *Rural college opportunities: Issues and challenges.* Paper presented at the annual conference of the American Educational Research Association, New Orleans, LA.

Morrison, R., Matuszek, T., & Self, D. (2010). Preparing a replication or update study in the business disciplines. *European Journal of Scientific Research, 47*(2), 278-287.

National Science Foundation. (2012). *Doctorate recipients from U.S. universities: 2011.* Retrieved from http://www.nsf.gov/statistics/sed/2011/data_table.cfm

Nevill, S. C., & Chen, X. (2007). *The path through graduate school: A longitudinal examination 10 years after bachelor's degree.* (NCES 2007-162). U. S. Department of Education. Washington, DC: National Center for Education Statistics.

Paulsen, M. (1990). *College choice: Understanding student enrollment behavior.* ASHE-ERIC Higher Education Report No. 6. Washington, D.C.: George Washington University, School of Education and Human Development.

Pearce, R. R., & Lin, Z. (2005). Cultural capital and postsecondary educational attainment among White and Chinese Americans: An analysis of NELS 1988-2000 [Electronic version]. *Asian American Policy Review, 14,* 19-38. Retrieved from Academic Search Premier database (EBSCOhost).

Perna, L. W. (2000). Differences in the decision to attend college among African-Americans, Hispanics, and Whites [Electronic version]. *Journal of Higher Education, 71*(2), 117-141. Retrieved from http://www.jstor.org/view/00221546/di014838/01p0137y/0

Perna, L. W. (2004). Understanding the decision to enroll in graduate school: Sex and racial/ethnic group differences [Electronic version]. *Journal of Higher Education, 75*(5), 487-527. Retrieved from Academic Search Premier database (EBSCOhost).

Perna, L. W., & Titus, M. A. (2005). The relationship between parental involvement as social capital and college enrollment: An examination of racial/ethnic group differences. *Journal of Higher Education, 76*(5), 485-517.

Perna, L. (2006). Studying college access and choice: A proposed conceptual model. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. XXI, pp. 99-157). The Netherlands: Springer.

Portney, L. G., & Watkins, M. P. (2009). *Foundations of clinical research: Applications to practice* (3rd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Rand, W., & Wilensky, U. (2006). *Verification and validation through replication: A case study using Axelrod and Hammond's Ethnocentrism model*. Paper presented at NAACSOS 2006, South Bend, IN, June 2006. Retrieved from https://ccl.northwestern.edu/papers/#2006

Rowan-Kenyon, H. T. (2007). Predictors of delayed college enrollment and the impact of socioeconomic status. *Journal of Higher Education, 78*(2), 188-214.

Sambol-Tasco, K. (2004). Slavery and the making of America. Retrieved from http://www.pbs.org/wnet/slavery/experience/education/history.html

Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences* (4th ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Teranishi, R. T., Ceja, M., Antonio, A. L., Allen, W. R., & McDonough, P. (2004). The college-choice process for Asian Pacific Americans: Ethnicity and socioeconomic class in context. *Review of Higher Education, 27*(4), 527-551.

Thiefoldt, D., & Scheef, D. (2004). Generation X and the millennials: What you need to know about mentoring the generations. Retrieved on from http://www.abanet.org/lpm/lpt/articles/mgt08044.html

Trower, C. A., & Chait, R. P. (2002, March-April). Faculty diversity: Too little too long. *Harvard Magazine.* Retrieved from http://www.harvardmag.com

U.S. Census Bureau. (2002). *U.S. summary: 2000: Census 2000 profile.* Retrieved from http://www.census.gov/census2000/states/us.html

U.S. Census Bureau. (2011). *2010 Census shows America's diversity.* Retrieved from http://2010.census.gov/news/releases/operations/cb11-cn125.html

U. S. Census Bureau. (2012). *Education: Higher education: Degrees.* Retrieved from http://www.census.gov/compendia/statab/cats/education/higher_education_degrees.html

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (n.d.). *Baccalaureate and beyond longitudinal study*. Retrieved from http://nces.ed.gov/surveys

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2006). *Dealing with debt: 1992-93 Bachelor's degree recipients 10 years later.* Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006156

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2010). *Status and trends in the education of racial and ethnic minorities.* Retrieved From http://nces.ed.gov/pubs2010/2010015/tables.asp

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2011a). *Digest of education statistics 2011*.Retrieved from http://nces.ed.gov/Programs/digest/

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2011b). *Fast facts: Degrees conferred by sex and race.* Retrieved from http://nces.ed.gov/fastfacts/display.asp?id=72

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2012). *Fast facts: Total fall enrollment in degree-granting institutions, by level and control of institution and race/ethnicity of student: Selected years, 1976 through 2011*. Retrieved from http://nces.ed.gov/programs/digest/d12/tables/dt12_264.asp

U.S. Department of Health and Human Services Health Resources and Services Administration, Bureau of Health Professions. (2006). *The rationale for diversity in the health professions: A review of the evidence.* Retrieved from http://bhpr.hrsa.gov/healthworkforce/allreports.html

Walpole, M. (2003). Socioeconomic status and college: How SES affects college experiences and outcomes. [Electronic version]. *Review of Higher Education, 27*(1), 45-73. Retrieved from http://muse.jhu.edu

Walpole, M. (2007a). *Economically and educationally challenged students in higher education: Access to outcomes.* ASHE Higher Education Report, *33*(3). San Francisco, CA. Jossey-Bass.

Walpole, M. (2007b). Emerging from the pipeline: African American students, socioeconomic status, and college experiences and outcomes. [Electronic version]. *Research in Higher Education 49*(3), 237-255. Retrieved from Academic Search Complete database (EBSCOhost).

Weinburg, S. L. (2008). Monitoring faculty diversity: The need for a more granular approach. [Electronic version]. *Journal of Higher Education 79*(4), 365-387. Retrieved from Academic Search Complete database (EBSCOhost).

Wine, J. S., Cominole, M. B., Wheeless, S., Dudley, K., Franklin, J., & Perry, K. (2005). *1993/03 Baccalaureate and beyond longitudinal study (B&B:93/03): Methodology report.* Retrieved from http://nces.ed.gov/pubsearch/

Winkle-Wagner, R. (2010). *Cultural capital: The promises and pitfalls in educational research.* ASHE Higher Education Report, *36*(1). Retrieved from Academic Search Complete database (EBSCOhost).

Xu, Y. J. (2011). *Advance to and persistence in graduate school: Identifying the influential factors and major-based differences.* Retrieved from http://www.airweb.org/GrantsAndScholarships/Pages/FundedGrantProposals.aspx

Yeung, F. (2011). *Legacies of immigration: Children of immigrants' experiences navigating higher education.*(Doctoral dissertation, University of California, Los Angeles). Retrieved from http://www.proquest.com/

Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. [Electronic version]. *Race Ethnicity and Education, 8*(1), 69-91. Retrieved from Academic Search Premier database (EBSCOhost).

Zhang, L. (2004). *Advance to graduate education: The effect of college quality and undergraduate majors* (CHERI Working Paper #51). Retrieved from Cornell University, ILR School site: http://digitalcommons.ilr.cornell.edu/workingpapers/49/

Appendices

Appendix A

IRB Letter

University Committee for the Protection of Human Subjects in Research
University of New Orleans

Campus Correspondence

Principal Investigator: Tammie M. Causey-Konate

Date: October 10, 2013

Protocol Title: "The Influence of Cultural and Social Capital on Post-Baccalaureate Students' decision to Enter and Complete Graduate School"

IRB#: 04Oct13

Human subjects are defined in CFR 46 as follows:
"Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains: (1) Data through intervention or interaction with the individual, or (2) identifiable private information."

The IRB has deemed that the research and procedures described in this protocol application do not qualify as human subject research as defined in CFR 46 and as such, the research is not subject to review by the Committee for the Protection of Human Subjects in Research.

Should the scope of activities change to include Human Subjects, it is necessary to seek approval from the committee prior to implementing such changes.

Best wishes on your project!

Sincerely,

Robert D. Laird, Chair
UNO Committee for the Protection of Human Subjects in Research

Appendix B

Permission to Use Figure

RE: Permission Request

Permissions Europe/NL <Permissions.Dordrecht@springer.com>

Mon 3/17/2014 9:52 AM

To:Kelly Michelle Alig <kmalig@my.uno.edu>;

Dear Madam,

With reference to your request to reprint material in which Springer Science and Business Media control the copyright, our permission is granted free of charge and at the following conditions:

Springer material

- represents original material which does not carry references to other sources (if material in question refers with a credit to another source, authorization from that source is required as well);
- requires full credit [Springer and the original publisher/journal title, volume, year of publication, page, chapter/article title, name(s) of author(s), figure number(s), original copyright notice] to the publication in which the material was originally published, by adding; with kind permission from Springer Science+Business Media B.V.;
- may not be altered in any manner. Abbreviations, additions, deletions and/or any other alterations shall be made only with prior written authorization of the author and/or Springer Science + Business Media.
- may not be republished in Electronic Open Access.

This permission

1. is non-exclusive.
2. includes use in an electronic form: provided it's password protected, or on intranet or university's repository, including UMI (according to the definition at the Sherpa website: http://www.sherpa.ac.uk/romeo/), or CD-Rom/E-book,
3. is subject to a courtesy information to the author (address is given with the article/chapter).
4. is personal to you and may not be sublicensed, assigned, or transferred by you to any other person without Springer's written permission.
5. is valid only when the conditions noted above are met.

Permission free of charge on this occasion does not prejudice any rights we might have to charge for reproduction of our copyrighted material in the future.

Best regards,

Kind regards,

Nel van der Werf (Ms)

Rights and Permissions/Springer

Van Godewijckstraat 30 | P.O. Box 17
3300 AA Dordrecht | The Netherlands
tel +31 (0) 78 6576 298
fax +31 (0)78 65 76-377

Nel.vanderwerf @springer.com
www.springer.com

From: Kelly Michelle Alig [mailto:kmalig@my.uno.edu]
Sent: Thursday, March 06, 2014 01:36 AM
To: Permissions Europe/NL
Subject: RE: Permission Request

Hi! Back in June, I emailed you about permission to use the below figure from Perna's (2006) work. At this time, I just need permission to publish in my dissertation. It will be made available online by my institution's database and library.

Thanks very much in advance,
Kelly Alig

From: Permissions Europe/NL <Permissions.Dordrecht@springer.com>
Sent: Wednesday, June 26, 2013 2:52 AM
To: Kelly Michelle Alig
Subject: RE: Permission Request

ISBN 978-1-4020-4512-7

Dear Ms. Alig,

Thank you for your permission request. We do not have enough information to handle your request. Can you please provide us with the following information:
- Concerning your new publication:
The exact intended use of the material, who will publish the new work, editor (of book), tentative title, expected amount of pages in new publication, price, print run, expected date to publish, to whom the publication would appeal to.

Best regards,
–
Maaike Duine
Springer
Rights and Permissions
–
Van Godewijckstraat 30 | 3311 GX
P.O. Box 17 | 3300 AA
Dordrecht | The Netherlands

tel
+31 (0) 78 657 6537
fax
+31 (0) 78 657 6377

maaike.duine@springer.com
–

From: Kelly Michelle Alig [mailto:kmalig@my.uno.edu]
Sent: Wednesday, June 19, 2013 5:06 PM
To: Permissions Europe/NL
Subject: Permission Request

My name is Kelly Alig, and I am a doctoral student in Educational Administration at the University of New Orleans. I am writing to request permission to use the figure for Perna's proposed model of studying college access and choice on p.117 of the following publication:

Perna, L. (2006). Studying college access and choice: A proposed conceptual model. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. XXI, pp. 99-157). The Netherlands: Springer.

Thanks so much,
Kelly Alig

Appendix C

Permission to Use Tables from NCES

Permission to Replicate Information

Unless stated otherwise, all information on the U.S. Department of Education's NCES website at http://nces.ed.gov is in the public domain and may be reproduced, published, linked to, or otherwise used without NCES' permission. This statement does not pertain to information at websites other than http://nces.ed.gov, whether funded by or linked to from NCES.

The following citation should be used when referencing all NCES products:
U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics.

Website Privacy & Security Policy
Statistical Standards

Product Disclaimer

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not constitute or imply endorsement, recommendation, or favoring by the United States Government.

Contacting NCES

To access the NCES address or the phone directory, visit the Contact NCES page.

Appendix D

NPSAS 93 Data Elements

APPENDIX A
NPSAS:93 Data Elements

Most variables listed below as derived variables (beginning about page A-11) are contained in the Data Analysis System available on the Internet at gopher.ed.gov. Other variables shown below include those collected at institutions or telephone interviews. Readers interested in variables not listed as a derived variable, or readers interested in obtaining access to the data files that will permit deriving or creating your own composite variables should contact the

DATA SECURITY OFFICER
STATISTICAL STANDARDS AND METHODOLOGY DIVISION
NCES/OERI - ROOM 408
US DEPARTMENT OF EDUCATION
555 NEW JERSEY AVENUE, NW
WASHINGTON DC 20208-5654
(202) 219-1831

E-Mail address CBARTON@inet.ed.gov

INSTITUTIONAL RECORDS DATA [CADE]

A1	Flag of accuracy of preloaded enrollment terms
A_DFLT	Student loan default/owe grant refund
A_FAMCN	Family contribution
A_PAACSR	(P) annual child support received
A_PAAFDC	(P) annual AFDC/ADC
A_PAASIF	Parent's assets include a farm
A_PABFDB	(P) business/farm debt
A_PABFVL	(P) business/farm value
A_PACASH	(P) cash, savings and checking
A_PADIS	Either parent a dislocated worker
A_PADISP	Either parent a displaced homemaker
A_PAEJST	(P) elementary/jr high/sr. high tuition paid
A_PAEOTI	(P) expected 1992 other taxable income
A_PAEUI	(P) expected 1992 untaxed income
A_PAEXEM	(P) exemptions claimed
A_PAEXTX	(P) expected 1992 tax paid
A_PAFEEI	Father's expected 1992 earned income
A_PAFINC	Father's income earned from work
A_PAGROS	(P) adjusted gross income from IRS form
A_PAHMDB	(P) home debt
A_PAHMVL	(P) home value
A_PAMAR	Parent's marital status
A_PAMDEX	(P) medical/dental expenses
A_PAMEEI	Mother's expected 1992 earned income
A_PAMINC	Mother's income earned from work
A_PANCOL	Number of dependents in college - 1992-93
A_PANFAM	(P) number of family members
A_PAOAGE	Age of older parent
A_PAOINC	(P) other untaxed income
A_PAORDB	(P) other real estate/investment debt
A_PAORVL	(P) other real estate/investment value
A_PASTAT	(P) 1991 tax return status
A_PASTLG	(P) state of legal residence
A_PATAX	(P) U.S. income tax paid
A_PATPCH	(P) tuition paid for how many children
A_PGI	Pell grant index
A_ST41	(S) resources of $4000 or more - A
A_ST42	(S) resources of $4000 or more - B
A_ST91TX	Student 1991 tax return status
A_ST92EI	Student's expected 1992 earned income
A_ST92OI	(S) expected 1992 other taxable income
A_ST92TX	Student's expected 1992 tax paid
A_ST92UI	(S) expected 1992 untaxed income
A_STADC	(S) annual AFDC/ADC
A_STAIF	Student assets include a farm
A_STASR	(S) annual child support received
A_STB69	(S) born before 1/1/69
A_STBFD	(S) business/farm debt
A_STBFV	(S) business/farm value
A_STCIT	(S) citizenship status
A_STCOL	(S) number in college
A_STCSH	(S) cash, savings, and checking
A_STDEAP	(S) monthly DEAP benefits
A_STDISW	Student/spouse a dislocated worker
A_STDSP	(S) dependents other than spouse
A_STE90	(S) parents claim as a exemption in 1990
A_STE91	(S) parents claim as a exemption in 1991
A_STE92	(S) parents claim as a exemption in 1992
A_STEJS	(S) elementary/junior high/senior high tuition
A_STEXM	(S) exemptions claimed
A_STFAM	(S) number of family members
A_STFBD	(S) first Bachelor's degree by 7/1/92
A_STFSA	(S) first year federal aid received
A_STGRS	Student adjusted gross income from IRS form
A_STHMDB	(S) home debt
A_STHMVL	(S) home value
A_STLSTA	Student's state of legal residence
A_STMAR	(S) martial status
A_STMDE	(S) medical/dental expenses
A_STMODP	(S) number of months DEAP benefits received
A_STMOVP	(S) number of months VEAP benefits received
A_STOUT	(S) other untaxed income
A_STOVD	(S) other real estate/investment debt
A_STOVI	(S) other real estate/investment value
A_STOW	(S) orphan or ward of the court
A_STSDH	Student/spouse displaced homemaker
A_STSPEI	(S) spouse's expected 1992 earned income
A_STSPI	(S) spouse's income earned from work
A_STSSB	(S) annual Social Security benefits
A_STSTI	Student income earned from work
A_STTAX	Student U.S. income taxes paid
A_STTCH	(S) tuition paid for how many children
A_STUMRS	(S) unpaid balance on most recent Stafford loan
A_STUSTF	Unpaid balance on Stafford loans
A_STVEAP	(S) monthly VEAP benefits
A_STVUS	(S) veteran of U.S. armed forces
A_STYRC	Year in college in 92-93
B27	Other admission test scores available
B28	Cumulative grade point average (gpa)
B30	Grade point average (gpa) scale
BAB	Baccalaureate and beyond
B_AAPA	From asset analysis-parents' contribution
B_AAST	From asset analysis-student's contribution
B_BACHLR	B.A. or B.S. received by July 1, 1992
B_BORN69	Student born before 1-1-69
B_CITZN	(S) U.S. citizen
B_CNPA	Contribution for student-parent contribution
B_CNST	Contribution for student-student contribution
B_COLYR	Year in college in 92-93
B_DEAPA	(S) DEAP amount expected per month
B_DEAPM	(S) number of months DEAP expected
B_E90	Was student a tax exemption for parents in 1990

B_E91	Was student a tax exemption for parents in 1991
B_E92	Was student a tax exemption for parents in 1992
B_EARN1	Student earnings-summer 1992
B_EARN2	Student earnings-school year 1992-93
B_FEDAID	When did student begin receiving federal aid
B_IAPA	From income analysis-parents' contribution
B_IAST	From income analysis-student's contribution
B_MARST	Student's marital status
B_NIB1	(S) nontaxable income & benefits-summer 1992
B_NIB2	(S) nontaxable income & benifits-1992-93
B_OLDAGE	Age older parent
B_OTHLGL	(S) legal dependents other than spouse
B_OTI1	(S) other taxable income-summer 1992
B_OTI2	(S) other taxable income-school year 1992-93
B_PADC	Did parent receive AFDC/ADC for 1991
B_PARMAR	Parents' marital status
B_PBFO	(P)amount owed on businesses and/or farm
B_PBFW	(P)present worth of businesses and/or farm
B_PCASH	(P) cash, savings & checking
B_PCHLD	Amount parent received in child support - 1991
B_PDISHM	Was a parent a displaced homemaker
B_PDISWK	Was a parent a dislocated worker
B_PEXMP	(P) 1991 exemptions
B_PFAMSZ	(P) number in family
B_PFARM	Is farm part of business/farm for parent
B_PFWORK	Father income from work - 1991
B_PGI	Pell grant index (PGI)
B_PHOME	(P) home worth
B_PHOPR	(P) home purchase price
B_PHOYR	(P) home purchase year
B_PIRS	(P) 1991 adjusted gross income (IRS)
B_PLTINC	(P) 1992 total expected income and benefits
B_PMED	(P) medical & dental
B_PMWORK	Mother income from work - 1991
B_PNOCOL	(P) number in college
B_POOREI	(P) amount owed on other real estate&investments
B_POTHR	(P) other untaxed income & benifits-1991
B_POWED	(P) home owed
B_PSS	(P) 1991 Social Security benifits
B_PSTRES	Parents' state of residence
B_PSTUIC	(P) elementary/secondary schl tuition
B_PTAX	(P) 1991 U.S. tax figures
B_PTAXPD	(P) 1991 U.S. income tax paid
B_PTUIT	(P) 1991 elementary/secondary school tuition
B_PWOREI	(P) worth of other real estate and investments
B_RES85B	(S) resources $4000 or more in 1985
B_RES86A	(S) resources $4000 or more in 1986 - A
B_RES87A	(S) resources $4000 or more in 1987 - A
B_RES88A	(S) resources $4000 or more in 1988 - A
B_RES89B	(S) resources $4000 or more in 1989 - B
B_RES90A	(S) resources $4000 or more in 1990 - A
B_RES91A	(S) resources $4000 or more in 1991
B_RESDTM	Date of residence (month)
B_RESDTY	Date of residence (year)
B_SADC	(S) AFDC/ADC 1991
B_SBFO	(S) amount owed on businesses and/or farm
B_SBFW	(S) present worth of businesses and/or farm
B_SCASH	(S) cash, savings & checking
B_SCHLD	(S) child support - 1991
B_SDISHM	(S) displaced homemaker
B_SDISWK	(S) dislocated worker
B_SEXMP	(S) exemptions (1991)
B_SFAMSZ	(S) number in family
B_SFARM	(S) farm part of business/farm
B_SHOME	(S) present home worth
B_SIRS	(S) 1991 adjusted gross income (IRS)
B_SMED	(S) medical and dental
B_SNOCOL	(S) number in college
B_SOOREI	(S) other real estate and investments owed
B_SOTHR	(S) other untaxed income & benifits-1991
B_SOWED	(S) home owed
B_SPER1	(S) spouse earnings(summer, 1992)
B_SPER2	Spouse earnings (school year 1992-93)
B_SSS	(S) Social Security benefits 1991
B_SSTRES	Student's state of legal residence
B_STAFUP	Stafford unpaid balance
B_STAX	(S) 1991 U.S. tax figures
B_STAXPD	(S) 1991 U.S. income tax paid
B_STLINC	(S) 1992 total expected income & benefits
B_STUIC	(S) elementry/secondary schl tuition for kids
B_STUIT	(S) elementary/secondary school tuition
B_STWORK	Student income from work(1991)
B_SWOREI	(S) other real estate and investments worth
B_SWWORK	(S) spouse income from work (1991)
B_TITIV	(S) loan default/owe refund
B_VAAMT	(S) other VA benefits amount expected
B_VAMO	(S) number of months other VA benefits expected
B_VEAPA	(S) VEAP amount expected per month
B_VEAPM	(S) number of months VEAP expected
B_VETERN	(S) U.S. veteran
B_WARD	Parents dead or ward of court
CALSYS	Type of calendar system used by school
CASEID	Student identification number
CLOCK	Courses/program measurement
COG_1A	Tuition and fees - primary year
COG_1B	Books and supplies - primary year
COG_1C	Room and board - primary year
COG_1D	Transportation - primary year
COG_1E	Miscellaneous and personal expenses-primary year
COG_1F	Dependent care - primary year
COG_1G	Handicapped care - primary year
COG_1H	Expected family contributions (EFC) primary year
COG_1H1	Parent contributions(dependent S only)primary yr
COG_1H2	Student's contributions from income-primary year
COG_1H3	Student's contributions from assets-primary year
COG_2SUM	Separate budget using CM for summer 1992
COG_3A	Tuition and fees - summer 1992 term
COG_3B	Books and supplies - summer 1992 term
COG_3C	Room and board - summer 1992 term
COG_3D	Transportation - summer 1992 term
COG_3E	Miscellaneous and personal expenses-summer 1992
COG_3F	Dependent care - summer 1992
COG_3G	Handicapped care - summer 1992 term
COG_3H	Expected family contriburions-summer 92
COG_3H1	Parent contributions (dependent Ss only) sum 92
COG_3H2	Student's contributions from income-summer 92
COG_3H3	Student's contributions from assets-summer 92
COG_INS	Institutional budget use CM
COG_PRI	Separate budget using CM for primary year
CONTROL	Proprietary or non-proprietary classification
C_BACHLR	Bachelor's degree
C_BORN69	Date of birth before 1-1-69
C_CITZN	(S) citizenship
C_CNPA	Parents' contribution
C_CNST	Student's contribution
C_CNTL	Total family contribution
C_COLYR	Year in college
C_DEAP	(S) DEAP (Dependent's Educ Assistance Program)
C_DEAPM	(S) DEAP months
C_DEP05	(S) dependent other than spouse age 0-5 1992-93
C_DEP13	(S) depend other than spouse age 13 and older
C_DEP612	(S) dependent other than spouse age 6-12,1992-93
C_FEDAID	(S) First received aid
C_HMPRPR	(S) home purchase price
C_LNDFLT	(S) loan default
C_LSTATE	(S) legal state
C_MARST	(S) marital status
C_OLDAGE	Age of older parent
C_OTHLGL	(S) legal dependants
C_PADC	(P) recieve AFDC or ADC
C_PAGI	(P) adjusted gross income
C_PARINC	Parents in college
C_PARMAR	(P) marital status
C_PCASH	(P) cash, checking and saving account
C_PCLM90	Did parents claim student in 1990
C_PCLM91	Did parents claim student in 1991
C_PCLM92	Did parents claim student in 1992
C_PDEBT	(P) real estate/investment debt
C_PDISHM	(P) dislocated homemaker
C_PDISWK	(P) dislocated worker
C_PEXMP	(P) tax exemptions
C_PFAMSZ	(P) number of family members
C_PFARMD	(P) business and farm debt
C_PFARMV	(P) business and farm value
C_PFWK1	Father earnings - 1991
C_PFWK2	Father earnings - 1992
C_PGI	Pell grant index (PGI)
C_PHLD	(P) child support
C_PHOMED	(P) home debt
C_PHOMEV	(P) home value
C_PINFM	(P) includes farm
C_PMED	(P) medical/dental expenses
C_PMWK1	Mother earnings - 1991
C_PMWK2	Mother earnings - 1992
C_PNOCH	(P) for how many children
C_PNOCOL	(P) total number in college
C_PNOTAX	(P) 1992 nontaxable income
C_POTHR	(P) other untaxed income
C_POTI	(P) other taxable income
C_PSS	(P) Social Security benefits
C_PSTRES	(P) legal state
C_PTAX	(P) tax return filed

CADE DATA ELEMENTS

C_PTUIT	(P) elementary/secondary tuition
C_PTXPD1	(P) 1991 U.S. income tax paid
C_PTXPD2	(P) 1992 U.S. income tax paid
C_PVALUE	(P) real estate/investments value
C_REFUND	Default/owe refund
C_RES85B	(S) resources of $4000 in 1985 - B
C_RES86B	(S) resources of $4000 in 1986 - B
C_RES87B	(S) resources of $4000 in 1987 - B
C_RES88B	(S) resources of $4000 in 1988 - B
C_RES89B	(S) resources of $4000 in 1989 - B
C_RES90B	(S) resources of $4000 in 1990 - B
C_RUPBL	Recent unpaid balance
C_SADC	(S) AFDC or ADC
C_SCASH	(S) cash, checking and savings account
C_SCHLD	(S) child support
C_SDEBT	(S) real estate/investments debt
C_SDISHM	(S) displaced homemaker
C_SDISWK	(S) dislocated worker
C_SFAMSX	(S) number of family members
C_SFARMD	(S) business and farm debt
C_SFARMV	(S) business and farm value
C_SFWK2	(S) earnings
C_SHOMED	(S) home debt
C_SHOMEV	(S) home value
C_SINFM	(S) includes farm
C_SMED	(S) medical/dental expenses
C_SMWK2	(S) spouse earnings
C_SNOCH	(S) for how many children
C_SNOCOL	(S) number in college
C_SNOTAX	(S) nontaxable income
C_SOTHR	(S) other untaxed income
C_SOTI	(S) other taxable income
C_SPWK1	(S) spouse earnings
C_SSS	(S) Social Security benefits
C_STAGI	(S) adjusted gross income
C_STAX	(S) tax return filed
C_STAXP1	(S) 1991 U.S. income tax paid
C_STEXMP	(S) 1991 tax exemptions
C_STUIT	(S) elementary/secondary tuition
C_STWK1	(S) 1991 earnings
C_STXPD2	(S) 1992 U.S. income tax paid
C_SVALUE	(S) real estate/investments value
C_TLUNBL	(S) total unpaid balance
C_VEAP	(S) VEAP amount
C_VEAPM	(S) VEAP months
C_VETERN	(S) veteran
C_WARD	(S) orphan/ward
C_YRHMPR	(S) year home purchased
D3A	Federal Pell Grant Program
D3B	FSEOG (Fed Supplemental Educ Opportunity Grant)
D3C	FWS (Federal Work Study)
D3D	Federal Perkins Loan Program (formerly NDSL)
D3E	Federal Stafford Loan Program (formerly GSL)
D3F	Federal PLUS Loan Program
D3FED	Other aid part of federal scholarships
D3G	Federal SLS Program
D3H	ICL (Income Contingent Loan)
D3I	HEAL (Health Educ Assistance Loan)
D3J	HPSL (Health Professions Student Loan)
D3K	EFN (Health Prof Schol for Exceptional Fin Need)
D3L	FADHPS (Fin Assist for Disadvantaged Health Professions Students)
D3M	NSL (Nursing Student Loan)
D3N	Other federal financial aid
D3ND1	Basis of the other federal award
D3POST	Participate in federal postsecondary programs
D3TYP1	Type of other federal aid
D4A	Vocational rehabilitation
D4B	State work study program
D4C	SSIG (State Student Incentive Grant)
D4D	Other state aid
D4E	Other state aid (second)
D4NEED1	Basis of other state aid
D4NEED2	Basis of other state aid (second)
D4TYP1	Type of other state aid
D4TYP2	Type of other state aid (second)
D5A	Athletic scholarship
D5B	Institution sponsored college work study
D5C	Need-based tuition waivers or discounts
D5D	Non need-based tuition waivers/discounts
D5E	Tuition waivers or discounts
D5F	Other tuition waivers or discounts
D5G	Other institutional aid
D5H	Other institutional aid, second
D5NEED1	Basis of institutional aid award
D5NEED2	Basis of institutional aid award, second
D5TYP1	Type of institutional aid
D5TYP2	Type of institutional aid, second
D6A	The "old" GI bill (chapter 34)
D6B	The Montgomery("new") GI bill (chap 30 and 106)
D6C	VEAP (Veterans' Educ Assistance Program Chap 32)
D6D	Survivors and Dependents Educ Program Chap35
D6E	Vocational rehabilitation
D6F	Health professional scholarship program
D6G	ROTC scholarships
D6H	Student loan repayment program
D6I	Other VA/DOD aid
D6J	Other VA/DOD aid, second
D6NEED1	Basis of VA/DOD award
D6NEED2	Basis of VA/DOD award, second
D6TYP1	Type of VA/DOD aid
D6TYP2	Type of VA/DOD aid, second
D7A	Employer (non-institution) tuition benefit
D7B	National Merit Scholarship
D7C	Outside/private loans
D7D	Other aid
D7E	Other aid, second
D7NEED1	Basis of other award
D7NEED2	Basis of other award, second award
D7TYP1	Type of other aid
D7TYP2	Type of other aid, second
DEP_2SUM	(S) dependency status during the summer 1992
DEP_PRI	(S) dependency status during the primary year
D_CITZN	Citizenship
D_DEFLT	Loan default
D_DEGOBJ	Degree objective
D_DEPST	Dependency status
D_ENSTAT	Enrollment status
D_FAMST	Parent's family status
D_FAMSZ	Parent's family size
D_HEAL	HEAL (Health Educ Assistance Loan)
D_HEPY	HEAL monthly payment
D_HPPY	HPSL monthly payment
D_HPSL	HPSL (Health Professions Student Loan)
D_MARST	Marital status
D_NOCOLL	Parents number of family members in college
D_OLDAGE	Age of older parent
D_OTHER	Student's other educ loans
D_OTHPY	Other monthly payment
D_P12CON	12-month contribution to student
D_P9MCON	9-month contribution to student
D_PAAI	Adjusted available income
D_PADJNT	Adjusted business/farm net worth
D_PAGI	(P) adjusted gross taxable income
D_PAINC	(P) available/discretionary income
D_PAPA	(P) asset protection allowance
D_PCA	(P) contribution from assets
D_PCAAI	(P) contribution from adjusted available income
D_PCASH	(P) cash and bank accounts
D_PCONTR	(P) contribution from income
D_PCP	(P) conversion percentage
D_PDNE	(P) discretionary net worth
D_PEMPAL	(P) employment allowance
D_PERKIN	Perkins Loan
D_PERPY	Perkins Loan monthly payment
D_PETUT	(P) elementary and secondary school tuition paid
D_PFICA	(P) FICA tax
D_PHOME	(P) home equity
D_PINCSP	(P) income supplement
D_PINCTX	(P) U.S. total income
D_PLPY	SLS monthly payment
D_PLUS	SLS (Federal Supplemental Loans for Students)
D_PMDEXP	(P) medical/dental expenses
D_PNETW	(P) net worth
D_POTHR	(P) other real estate and investments equity
D_POTHTX	(P) state and other taxes
D_PSTND	(P) standard maintenance allowance
D_PTLALW	(P) total allowances
D_PTLINC	(P) total income
D_PVIB	(P) untaxed income and benefits
D_REFUND	(S) refund owed
D_SAGI	(S) adjusted gross/taxable income
D_SAINC	(S) available/discretionary income
D_SCON	(S) contribution from income
D_SEMPAL	(S) employment allowance
D_SETUT	(S) elementary and secondary school tuition paid

CADE DATA ELEMENTS

D_SFICA (S) FICA tax
D_SINCTX (S) U.S. income tax
D_SMDEXP (S) medical/dental expenses
D_SOTHTX (S) state and other taxes
D_SPOUSE (S) spouse's loans
D_SPPY (S) spouse's monthly payment
D_SSTND (S) standard maintenance allowed
D_SSUMLV (S) summer living allowance
D_ST12CN 12-month contribution to student
D_ST9CON 9-month contribution to student
D_STAAI (S) adjusted available income
D_STADJN (S) adjusted business/farm net worth
D_STAPA (S) asset protection allowance
D_STCA (S) contribution from assets
D_STCAAI (S) contribution from adjusted available income
D_STCASH (S) cash and bank accounts
D_STCP (S) conversion percentage
D_STDNW (S) discretionary net worth
D_STFFSZ (S) family size
D_STFGSL Stafford or GSL
D_STGSPY Stafford monthly payment
D_STHOME (S) home equity
D_STINCS (S) income supplement
D_STLALW (S) total allowances
D_STLINC (S) total income
D_STNCOL (S) number in college
D_STNETW (S) net worth
D_STOTH (S) other real estate and investments equity
D_STUSP (S) spouse a student
D_SVIB (S) untaxed income and benefits
D_TOTAL (S) totals
D_TOTPY (S) total monthly payment
D_YRSCH Year in school
EPC_2SUM Separate inst budgt & EFC for student sumr '92
EPC_PRI Inst budgt& EFC for student-primary term/year
FFA01 Indicator for Federal Pell Grant Program
FFA02 Indicator for the FSEOG Program
FFA03 Indicator for the FWS Program
FFA04 Indicator for Federal Perkins Loan Program
FFA05 Indicator for Federal Stafford Loan Program
FFA06 Indicator for Federal HEAL Program
FFA07 Indicator for other federal financial programs
INSTID Institution identification number
INS_1A Tuition and fees - primary year
INS_1B Books and supplies - primary year
INS_1C Room and board - primary year
INS_1D Transportation - primary year
INS_1E Miscellaneous and personal expenses-primary year
INS_1F Dependant care - primary year
INS_1G Handicapped care - primary year
INS_1H Expected family contribution (EFC) primary year
INS_1H1 Parent contribution(dependent S only) primary yr
INS_1H2 Student's contribution from income-primary year
INS_1H3 Student's contribution from assets-primary year
INS_3A Tuition and fees - summer 1992 term
INS_3B Books and supplies - summer 1992 term
INS_3C Room and board - summer 1992 term
INS_3D Transportation - summer 1992 term
INS_3E Miscellaneous personal expenses - summer 1992
INS_3F Dependent care - summer 1992 term
INS_3G Handicapped care - summer 1992 term
INS_3H Expected family contribution (EFC) summer 1992
INS_3H1 Parent contribution (dependent S only) sum 92
INS_3H2 Student's contribution from income-summer 1992
INS_3H3 Student's contribution from assets-summer 1992
M_C1 Student eligibility flag
M_C10_1 Total tuition and fees, (up to 12 terms)
M_C11 Jurisdiction for tuition purposes
M_C12 Program student enrolled (first term)
M_C13 Program student enrolled (last term)
M_C14 Student level (first term)
M_C15 Student level (last term)
M_C16B Total length of program/clock or contact hours
M_C16C Lab and classroom hours required per week
M_C18AM Graduation date from baccalaureate program-month
M_C18AY Graduation date from baccalaureate program-yr
M_C3M Month student first entered sample institution
M_C3Y Year student first entered sample institution
M_C4 Enrolled during the prior year at this school
M_C5 Enrollment credit or clock hour classification
M_C7A_1 Enrolled in this term, (up to 12 terms)
M_C7E1M Term of enrollment-ending month(up to 12 months)
M_C7E1Y Term of enrollment-ending year (up to 12 years)
M_C7S1M Term of enrollment-start mon#1(up to 12 terms)
M_C7S1Y Term of enrollment-start year#1(up to 12 terms)
M_C8_1 Student attend status, term 1(up to 12 terms)
M_C9_1 Credits enrolled during term 1(up to 12 terms)

M_D1 Any financial aid for the study year
M_D2 Student apply for any financial aid
M_D3 Any federal aid during the study year
M_D4 Awarded any state aid during the study year
M_D5 Awarded institutional aid during thetudy year
M_D6 Was student awarded VA/Department of Defense Aid
M_D7 Awarded other aid or financial contributions
M_STACT Student composite ACT score
M_STACTY In what year did the student take the ACT
M_STDBD Student's date of birth - day
M_STDBM Student's date of birth - month
M_STDBY Student's date of birth - year
M_STGEN Gender
M_STOATS Score of the other admission test taken
M_STOATY Year during which other admission test was taken
M_STSATM Student's SAT math score
M_STSATV Student's SAT verbal score
M_STSATY Year the student took the SAT
M_STTSTO SAT scores available
M_USED Finanical aid form primarily used
NOTAPP Student enrollment indicator
NPPRIME Separate financial aid awards offered in summer
NPSASID Student CATI id
PDATE1M Begin date primary term/year financial aid awards are based (month)
PDATE1Y Begin date primary term/year financial aid awards are based (year)
PDATE2M End date primary term/year financial aid awards are based (month)
PDATE2Y End date for primary term/year financial aid awards are based (year)
PEL_1A Tuition and fees - primary year
PEL_1B Allowance for room, board, books, supplies, trans., misc. - primary yr
PEL_1C Allowance for child care-primary year
PEL_1D Allowance for handicapped students-primary year
PEL_1E Pell Grant Index - primary year
PEL_2SUM Pell budget for student for summer 1992
PEL_3A Tuition and fees - summer 1992 term
PEL_3B Allowance for room, board, books, supplies, misc. - summer 1992 term
PEL_3C Allowance for child care - summer 1992
PEL_3D Allowance for handicapped students - summer 1992
PEL_3E Pell Grant Index - summer 1992
PEL_PRI Pell budget for student in the primary year
Q22A High school degree or equivalent
Q23A Race/ethnicity
Q24A Hispanic origin
Q25A Citizenship
Q26A Local residence
Q27A ACT scores available
S1DATE1 Summer term beginning month - 1992
S1DATE2 Summer term ending month - 1992
STUDTYPE Student's enrollment classification
S_PAASSB Annual Social Security benefits
TDAT1EM Institutional level term number 1 - ending month (up to 12 terms)
TDATE1EY Institutional level term number 1 - ending year (up to 12 terms)

COMPUTER ASSISTED TELEPHONE INTERVIEW [CATI] ALL STUDENTS

A001 Enrolled in course for credit during NPSAS year
A002 Enrolled for degree or formal award in NPSAS year
A003 Enrolled in program specific occupation, 1992-93
A004 Code ineligible/wrong person/wrong telephone number/other situations
A005 Age of student
A006 Type of high school diploma, GED, certificate, didn't complete h.s.
A007 Student currently enrolled in high school
A008 High school graduation year
A009 Type of high school graduated from (public, private, religious)
A012 Student transfer to sample school during 1992-93
A014 Level in sample school last term of 1992-93
A015 Degree program at sample school
A016 Degree program completed during the NPSAS year
A017 Month awarded degree working towards

CADE DATA ELEMENTS

A019	Month expected to complete degree program
A020	Number of degrees completed since high school
A026	Sample school-level
A110	Has student ever taken the ACT test
A111	Year first enrolled in postsecondary school
A117	Year awarded degree working towards
A119	Year expected to complete degree
A123	Student attend other postsecondary schools - #1
A126	Other school #1-level
A137	Clock or credit hour basis at sample school
A13a	Sample school-major or program of study
A14A	Year student began graduate program
A1X9	Year after HS first completed postsec course
A210	Score from ACT undergraduate test
A215	Month completed requirements for BA/BS degree
A223	Student attend other postsecondary schools - #2
A226	Other school #2-level
A237	Other school #1-credit hours/clock hours basis
A28c	Sample school-control
A28g	Other school #1-control
A28k	Other school #2-control
A28o	Other school #3-control
A310	Student ever taken the SAT test
A315	Year completed requirement for bachelor's degree
A323	Student attend other postsecondary schools - #3
A326	Other school #3-level
A337	Other school #2-credit hours, clock
A410	Combined SAT score for student
A437	Other school#3-credit hours,clock hours
a510	Has student taken any other undergraduate test
A710	Total score from any other undergraduate test
AA03	Receive BA/BS from sample school in 1992-93
AA20	Number of other degrees, licenses, certifications
AJ12	Month after HS first enrolled in PSE course
AK12	Year after high school first enrolled in PSE
AL01	Type of other degrees/licenses/certificates #1
AL02	Type of other degrees/licenses/certificates #2
AL03	Type of other degrees/licenses/certificates #3
AL04	Type of other degrees/licenses/certificates #4
AL05	Type of other degrees/licenses/certificates #5
AL06	Type of other degrees/licenses/certificates #6
AX11	Month first enrolled in a course PSE
AX12	Student enrolled first postsecondary course while still in high school
AX13	Student level in school in first term of 92-93
AX16	Cumulative grade point average at sample school
AX18	Main reason for not completing degree at sample
AX97	Estimate of cumulative gpa-scale of 25.0 to 100.0
AX98	Estimate cumulative gpa-scale 1.0 to 10.0
AX99	Estimate cumulative gpa-scale 1.0 to 5.0
AXX9	Month after HS when first completed PSE course
AY01	Year received other degrees/licenses earned #1
AY02	Year received other degrees/licenses earned #2
AY03	Year received other degrees/licenses earned #3
AY04	Year received other degrees/licenses earned #4
AY05	Year received other degrees/licenses earned #5
AY06	Year received other degrees/licenses earned #6
B002	Change major at sample school between
B016	Type of housing student lived in during 1992-93
B017	Amount respondent (or family) paid for housing
B018	Did housing costs include a meal plan
B019	Was school-owned housing on or off campus
B022	Monthly expenses for rent/mortgage and utilities
B023	Average monthly expenses for food
B024	Average monthly expense for transportation costs
B025	Average monthly-personal expenses
B026	Monthly expenses dependent, day care, babysitting
B027	Average monthly expenses repaying educ loans 92-93
B028	Avg. monthly expenses for other expenses
B106	Attend school full time/part time in 1992-93
B107	Number of courses taken between 7/1/92-6/30/93
B108	Number of credits taken during the NPSAS year
B109	Type of system credit hours were based on
B110	Number of hours instruction scheduled weekly
B111	Total tuition and fees for the 92-93
B112	Amount spent on books and supplies in 92-93
B113	Amount spent on other items in 92-93
B114	Amount spent commuting to class in 92-93
B115	Amount spent on other educ expenses for 92-93 year
B2a0	Major at sample school during first term
B2a1	Major at other school #1 attended in 1992-93
B2a2	Major at other school #2 attended in 1992-93
B2a3	Major at other school #3 attended in 1992-93
B2d0	Major at sample school during last term 1992-93
BD01M	Beginning month for term #1 (up to 12 terms)
BD01Y	Beginning year term #1(up to 12 terms)
BM0F	Beginning month of first enrollment
BM0L	Beginning month of last enrollment
BY0F	Beginning year of first enrollment
BY0L	Beginning year of last enrollment
C001	Enrolled in PSE between 7/1/91-6/30/92
C002	Receive financial aid for 1991-1992
C004	Apply for financial aid for 1992-93
C005	Awarded aid from sample inst in 1992-93
C006	Accept aid for 1992-93 year at sample school
C008	Total aid awarded accepted at sample school 92-93
C009	Any aid in grants/scholarships-at sample school
C010	Sample school-total of grants and scholarships
C012	Sample school-amnt of Pell Grant or SEOG
C014	Sample-amount other federal grants or scholarships
C016	Sample-amount state grants or scholarships
C018	Sample-amount of an athletic scholarship
C020	Sample-amount of an academic scholarship
C022	Sample-amount of other school based scholarship
C024	Sample-inst amount of aid from some other source
C026	Tuition and/or fees waived at sample school
C027	Amount tuition/fees were waived at sample school
C028	Awarded aid amt include loans, 92-93 sample schl
C029	Total of loans of 92-93 accepted and awarded aid
C031	Amount from Stafford/Guaranteed Student Loan
C033	Amount from Perkins/National Direct Student Loan
C035	Amount from Supplemental Loan to Student (SLS)
C037	Amount from Health Educ Assistance Loan
C039	Amount of Health Professional Student Loan
C041	Amount of aid awrded from any other federal loan
C043	Amount aid awarded from a state loan
C045	Amount of postsecondary institutional loan
C046	Did you receive loans from other sources
C048	Other loan 1 amount
C050	Accepted aid incl work-study, fellowships, assistantships
C051	Total financial aid received from sources like work-study, fellowships
C052	Any of amount aid award from a college work-study
C054	Amount work-study funded as a federal program
C056	Amount work-study funded as a state-sponsored
C058	Institution Work-study
C060	Amount of loan-unsure of the source
C061	Any fellowships
C063	Amount of fellowship funded by fed government
C065	Amount of fellowship funded by a state government
C067	Amount of institution fellowship
C070	Amount of fellowship funded from another source
C071	Amount from a teaching assistantship
C072	Any aid from a research assistantship
C073	Amount from another assistantship
C075	Did respondent receive veterans benefits
C076	How much were veterans benefits respondent
C077	Number of months student received VA benefits
C078	Student receive aid from VEAP
C079	How much were these benefits (VEAP)
C080	Number of months respondent received VEAP
C081	Confirm respondent did not receive financial aid
C082	Amount received a church/ religious organization
C084	Amount received from a community organization
C086	Amount received from civic/professional org
C088	Amount of aid from a National Merit Scholarship
C089	Amount of aid received from any other source
C091	Amount of aid received from other outside source
C111	Through 6/30/93, amount borrowed for educ
C112	How much still owed is/was in federal loans
C114	Through 6/30/93, amt borrowed graduate/ first-profess educ
C116	Of the amount borrowed, how much still owed
C118	Amount respondent owes in federal loans
c20a	Why not apply for aid-family/student could pay
c20b	Why not apply for aid, didn't want to go in debt
c20c	Why did not apply for aid, income too high
c20d	Why did not apply for aid, grades/scores too low
c20e	Why did not apply for aid-too hard to apply for aid
c20f	Why no apply for aid-not want to disclose finance
c20g	Why did not apply for aid-ineligible part-time
c20h	Why did not apply for aid-no money available
c20i	Why no apply for aid-missed application date
c20j	Why did not apply for aid-any other why

CATI Data Elements

C248	Other loan #2 amount from other source
C348	Other loan #3 amount from other source
C448	Other loan #4 amount from other source
CC05	Awarded financial aid-other schools for 92-93
CC06	Accept aid for 92-93 at other schools
CC08	Total aid awarded and accepted at other schools
CC09	Any grant aid at other schools attended
CC10	Other schools-total amount of grants/scholarships
CC12	Other school-amount of a Pell Grant or SEOG
CC14	Others-amn funded by other federal grants
CC16	Others-amount funded by state government grants
CC18	Other schools-amount of an athletic scholarship
CC20	Other schools-amount of an academic scholarship
CC22	Other school-amount of other inst scholarship
CC24	Other schools-aid amount from some other source
CC26	Tuition/fees waived at other schools in 92-93
CC27	Tuition/fees were waived at other schools in 92-93
CC28	Other school-amount any from loans in 92-93 yr
CC29	Other-how much was the total amount of these loans
CC31	Other-aid awrded from a Stafford/guaranteed loan
CC33	Other-aid from a Perkins/national direct loan
CC35	Other-aid from a Supplemental Loan to Students
CC37	Other-aid awarded from a HEAL loan
CC39	Other-aid awarded from a HPSL loan
CC41	Other-aid awarded from any other federal loan
CC43	Other-aid awarded from a state loan
CC45	Other-aid awarded from a an institution loan
CC46	Other schools-receive loans from other sources
CC50	Other-financial assistance?
CC51	Other-total financial assistancefrom these sources
CC52	Other-of the amount awarded any from work-study
CC54	Other schools-Amt of loan work-study from fed pgrm
CC56	Other schools-Amt the work-study funded as state
CC58	Other schools-Amt work-study fm inst sponsored pgm
CC60	Other schools-Amt unsure of the work-study funding
CC61	Other schools-was any of the aid from a fellowship
CC63	Other-Amt fellowship funded by federal government
CC65	Other-Amt fellowship funded by a state government
CC67	Other-Amount fellowship funded by institution
CC70	Other schools-fellowship amt from other source
CC71	Other-amount of aid from a teaching assistantship
CC72	Other-amount of aid from a research assistantship
CC73	Other-amount of aid from another assistantship
CC75	In 1992-93 get veterans benefits-other schools
CC76	Amount of veterans benefits-other schools
CC77	Number of months got veterans benefits-other schls
CC78	In 1992-93 receive aid from VEAP-other schls
CC79	Amount of VEAP benefits-other schools
CC80	Number of months VEAP benefits-other schls
CC81	Confirm S did not get aid for 92-93-other schls
CC82	Amount aid from a church or religious group
CC84	Amount from a community group other schools
CC86	Amount from civic/fraternal/prof. groups
CC88	Amount from a National Merit Scholarship-other sch
CC89	Amount from any other source-other schools
CC91	Amount from other source-other schools
CX18	S in default on a federal student loan/grant
CX52	Amount of college work-study awarded
CX61	Amount received from fellowships in 1992-93
CX80	You got x amount of aid in 92-93,is that right?
CX82	S receive aid from other sources, i.e., employer
CX89	Respondent receive aid from veterans benefits
CX91	Amt received from employer (tuition reimbursement)
CY52	Other schools-amount of aid for work-study
CY61	Other schs-total amount of fellowships for 1992-93
CY80	Other schools-confirm amt of aid received in 92-93
CY82	Other schools-receive aid through other sources
CY89	Other schools-amount from veterans benefits
CY91	Other schools-Amount aid received from an employer
D001	S's marital status between 7/1/92 and 6/30/93
D002	Funds used for 1992-93, amt from personal savings
D006	Parents' marital status
D008	Which parent is deceased
D011	Does respondent have any legal guardians
D012	Type of guardian (male, female, two guardians)
D013	Parent student lives with when not in school
D015	Parent providing S most financial support
D016	Who provided most support when last supported by parent or guardian
D017	Amount of parental contributions for 1992-93
D018	Amount received from parents as loans for 1992-93
D019	Have parents contributed/loaned money for 92-93
D020	Amount mother contributed toward 1992-93
D021	Amount received from mother for 1992-93 expenses
D023	Parents provide additional support in 1992-93
D024	Est amt of parent help with other forms of support
D033	Student or parents use a college prepayment plan
D034	Sponsor of tuition prepayment plan
D035	Use U.S. savings bonds for 92-93 expense
D036	Other relatives/friends contribute to expenses
D037	Amount received in loans from other relatives
D120	Amount father contributed toward 1992-93 expenses
D121	Amt in loans recd from father for 92-93 expenses
d25b	Parents provide respondent with meals
d25c	Parents provide respondent with clothing
d25d	Parents provide respondent with charge cards
d25e	Parents provide help with automobile loan payments
d25f	Parents provide help with auto repair bills
d25g	Parents provide help with any type of insurance
d25h	Parents provide any other type of assistance
d25z	Parents provide respondent with housing
DX23	Amt of additional parental help with other items
DX34	Take out 2nd mortgage, refinance any real estate
E001	S employed between July 1, 1992 and June 30, 1993
E003	What kind of company was student's employer
E005	In what month did the job start
E006	In what month did the job end
E007	Number of hours per week respondent worked at job
E009	Was job offered through college work-study
E010	Job related to current major
E011	Job on or off campus
E012	Number of other jobs held during 1992-93
E013	Total income from all jobs in 1992-1993
E01Y	If not working in 92-93, availability for emplymnt
E03A	How closely job related to major/area study
E05a	In what year did job start
E06a	In what year did the job end
E1OC	Occupation coding-SOC coding
E1a	Participate in apprenticeship program in 92-93
E1b	Participate in cooperative educ program in 92-93
E1c	Participate in internship/practicum pgm in 92-93
E1IC	Industry coding
ED01M	Ending month for enrollment term #1
ED01Y	Ending year for enrollment term #1
ED02M	Ending month for enrollment term #2
ED02Y	Ending year for enrollment term #2
ED03M	Ending month for enrollment term #3
ED03Y	Ending year for enrollment term #3
ED04M	Ending month for enrollment term #4
ED04Y	Ending year for enrollment term #4
ED05M	Ending month for enrollment term #5
ED05Y	Ending year for enrollment term #5
ED06M	Ending month for enrollment term #6
ED06Y	Ending year for enrollment term #6
ED07M	Ending month for enrollment term #7
ED07Y	Ending year for enrollment term #7
ED08M	Ending month for enrollment term #8
ED08Y	Ending year for enrollment term #8
ED09M	Ending month for enrollment term #9
ED09Y	Ending year for enrollment term #9
ED10M	Ending month for enrollment term #10
ED10Y	Ending year for enrollment term #10
ED11M	Ending month for enrollment term #11
ED11Y	Ending year for enrollment term #11
ED12M	Ending month for enrollment term #12
ED12Y	Ending year for enrollment term #12
EJ12	Average # hours a week working while enrolled
EM0F	Ending month of first enrollment
EM0L	Ending month of last enrollment
EXX1	Work for pay between 1/1/1992 and 6/30/93
EY0F	Ending year of first enrollment
EY0L	Ending year of last enrollment
F010	Satisfied with security measures taken for safety (non-B&B only)
F047	Highest level of educ expected at sample school
F048	Highest level of educ S ever expects to complete
F049	Plans enrolled/employed/both-during next 12 mnths
F10A	How often concerned for safety at sample school
f19a	S taken/plan to take Graduate Record Exam(GRE)
f19b	S taken/plan to take National Teacher's Exam (NTE)
f19c	S taken/plan to take Miller's Analogy Test (MAT)
f19d	S taken/plan to take Dental Admissions Test

CATI Data Elements

f19e	S taken/plan to take GMAT
f19f	S taken/plan to take the LSAT
f19g	S taken/plan to take the MCAT
f19h	S taken or plan to take State Teacher Exam
f19i	S taken or plan to take any other tests
f20a-j	In what month/year(did you/do you plan to)take GRE,NTE,DAT,GMAT,LSAT,STE
f21a-j	Total composite score each test mentioned
FX19	Taken or plan to take any graduate school admissions tests
FX49	View self as FT/PT worker and/or FT/PT student
G001	Sex of the respondent
G002	Race of the respondent
G003	Is respondent of Hispanic origin
G004	Type of Hispanic descent of respondent
G005	Type of Asian or Pacific Islander descent
G007	Is respondent a United States citizen
G008	As noncitizen, is S eligible for federal aid
G009	Language spoken most often at home when growing up
G010	In what country was respondent born
G011	State of legal residence (student)
G012	On active U.S. military duty or in the reserves
G013	Veteran of the U.S. military
G014	In which branch of military does respondent serve
G015	Active duty or reserves military status
G023	Respondent registered to vote in the U.S.
G024	Respondent ever voted in any election
G025	Voted in 1992 presidential election
G026	S ever do volunteer or community service work
G027	Perform any community service in NPSAS year
G028	Community service required by any of S's classes
G029	Hours per week of community service during 1992-93
G030	Community service related to S's future career
G035	In next 12 months, plan to volunteer?
g16a	Have hearing impairment disability
g16b	Have a speech disability or limitation
g16c	Have an orthopedic or mobility limitation
g16d	Have a specific learning disability
g16e	Have a vision impairment or legally blind
g16f	Have any other type of disability
g16z	Have any of following disabilities/no disabilities
H004	Highest level of educ S's father completed
H010	Referent parent's state of legal residence
H012	Number of people parents supported during 1992-93
H03A	Age of respondent's father/male guardian
H03B	Age of respondent's mother/female guardian
H04B	Highest level of educ S's mother completed
H10B	Non-referent parent's state of legal residence
H11A	1992 referent parent's total yearly income
H11B	Non-referent parent's total yearly income for 1992
H12B	Number of people supported by non-ref parent 92-93
H14A	Of number supported by parents, # in school ref
H14B	Of people supported by parent, # in school in 92-93 - non referent parent
H14T	Of people supported by parents, # in schl in 92-93 - new answer
H14W	Of people supprtd by non-ref parent,number in school in 92-93-new answer
H36D	1991 referent parent's total yearly income
H36M	1991 non-referent parent's total yearly income
H37D	Referent parent's 91 yearly income-$30,000?
H37M	Non-referent parent's 91 yearly income-$30,000?
H38D	Referent parent's 1991 yearly income-$30,000?
H38M	Non-referent parent's 1991 yearly income-$30,000?
H39D	Referent parent's 1991 yearly income- < $30K?
H39M	Non-referent parent's 1991 yearly income-<$30K?
HF2A	Father earn an Associate's degree
HM3A	Mother earn an Associate's degree
HX11	Referent parent's 1992 income-> or < $30,000?
HX12	Referent parent's 1992 income-> $30,000?
HX13	Referent parent's 1992 yearly income-$30,000?
HX1B	Non-referent parent's 1992 income-> or < $30K?
HX2B	Non-referent parent's 1992 income > or <$30k
HX3B	Non-referent parent's 1992 income-> $30,000
I003	Is respondent a ward of the court
I004	Legal dependents other than self
I005	Referent parent claim S as a tax exemption in 1990
I007	Beginning in 1987-88, year first got federal aid
I008	Total annual resources of $4000 or more in 1985
I010	Number of people respondent supported in 1992-93
I012	Number of dependents in college in 1992-93
I014	Number of children in private school 1992-93
I016	Amount of tuition per year for private schooling
I053	Estimate of S's 1991 total income from all jobs
I054	1991 total job income-more or less than $30,000
I05A	Referent parent claim S as a tax exemption in 1991
I05B	Referent parent claim S as a tax exemption in 1992
I05F	Non-referent parent claim S as a tax exemptn in 90
I05G	Non-referent parent claim S as a tax exemptn in 91
I05H	Non-referent parent claim S as a tax exemptn in 92
I060	Spouse's 1991 income from all jobs
I064	S's 1991 income, from all sources, prior to taxes
I065	Est 91 inc from all sources-more or less than $30k
I067	Receive any Social Security in 1991
I08A	Total annual resources of $4000 or more in 1986
I08B	Total annual resources of $4000 or more in 1987
I08C	Total annual resources of $4000 or more in 1988
I08D	Total annual resources of $4000 or more in 1989
I08E	Total annual resources of $4000 or more in 1990
I08F	Total annual resources of $4000 or more in 1991
I400	Receive any AFDC or ADC in 1991
I401	Receive child support in 1991
I402	Receive any other untaxed income in 1991
I500	Receive any AFDC or ADC in 1992
I501	Receive child support in 1992
I502	Receive any other untaxed income or benefits in 92
I504	Estimate current value of cash,checking accounts
I505	Estimate of current value of home
I506	Estimate of the amount currently owed on home
I507	Estimate current value of other real estate
I508	Estimate amt currently owed on real estate
I509	Estimate current value of business, including farm
I510	Estimate amt currently owed business, incl farms
I513	Current worth retirement and/or pension accounts
I514	Est worth of retirement and/or pension accounts
IP53	Total job income in 1992
IP54	Estimate of 1992 job income-more or less than $30K
IP60	Spouse's total job income in 1992
IP64	Total 1992 income, all sources, prior to taxes
IP65	Estimate 1992 income,all sources-> or < $30K?
IP67	Receive any Social Security in 1992
IP69	Current worth cash,savings and checking accounts
IP70	Current worth of S's (and spouse's) home
IP71	Amount currently owed on value of S's home
IP72	Current worth of other real estate and investments
IP73	Amount owed on other real estate and investments
IP74	Current total worth of business, including farms
IP75	Amount currently owed on businesses or farms
IX10	How many of these dependents are yourself (S)
IX11	How many of these dependents are S's parents
IX12	How many dependents are less than 6 years old
IX13	How many dependents are between 6-13 years old
IX14	How many dependents are more than 13 years old
IX15	Was S's spouse enrolled in college 7/1/92-6/30/93
IX54	Est of 91 job income-groupings more than $30,000
IX55	Est of 91 job income-groupings less than $30,000
IX56	Student or S's parents get food stamps since 1/91
IX57	Who received the food stamps in 1991
IX61	Est spouse's 91 job income-more or less than $30K
IX62	Est of spouse's 91 income-groupings more than $30K
IX63	Est of spouse's 91 income-groupings less than $30K
IX65	Est of 91 total income-groupings more than $30,000
IX66	Est 1991 income, from all sources-less than $30K
IY54	Est 1992 job income-groupings more than $30,000
IY55	Est 1992 job income-groupings less than $30,000
IY56	Student or S's parents get food stamps since 1/92
IY57	Who received the food stamps in 1992
IY61	Est spouse's 92 job income-more or less than $30K
IY62	Est spouse's 92 job income-more than $30K
IY63	Est spouse's 92 job income-less than $30K
IY65	Est 92 total income-groupings more than $30,000
IY66	Est of 92 total income-groupings less than $30,000
J008	Consider graduation rate to attend sample school
J009	Consider campus crime rate-deciding to attend
J010	Consider job placement rate in deciding to attend
J11A	Remedial help to improve reading skills in 1992-93
J11B	Receive remedial help in writing during 1992-93
J11C	Receive remedial help in mathematics in 92-93
J11D	Receive remedial help for study skills in 1992-93
J12A	Number of hours remedial help to improve reading
J12B	Number of hours remedial help to improve writing
J12C	Number hours remedial help to improve mathematics
J12D	Number hours of help to improve study skills
JX10	Ever taken remedial instruction since began PSE
NEN0	Number of enrollments

CATI Data Elements

NP93ID Computed NPSAS identifier
SF01-12 School index for enrollment #1 thru #10-12

ALL STUDENTS - VERBATIM ITEMS

A138 Sample school-specify other type of system
A13b Sample school-major or program of study-verbatim
A238 Other school #1-specify other type of system
A338 Other school #2-specify other type of system
A438 Other school #3-specify other type of system
A610 Name of other undergraduate test-verbatim
AI00 Sample school IPEDS code
AI01 Other school #1-IPEDS code
AI02 Other school #2-IPEDS code
AI03 Other school #3-IPEDS code
AJ13 Specify other undergrad program, 1st term text
AJ14 Specify other undergrad program, last term text
AJ15 Specify other undergraduate program-sample school
AJ18 Other reason for not completing degree
AK13 Specify other grad pgm, first term-verbatim text
AK14 Specify other grad pgm, last term-verbatim text
AK15 Specify other graduate program-sample school
AX87 Estimate major GPA-other scale
AX96 Estimate cumulative GPA-other scale
B16a Other type of housing used by student in 1992-93
B2b0 Text of major at sample school for 1st term
B2b1 Verbatim text of major at other school #1 attended
B2b2 Verbatim text of major at other school #2 attended
B2b3 Verbatim text of major at other school #3 attended
B2e0 Verbatim of major at sample school in last term

C047 Specify other loan 1 name from sources other than Federal,State,Inst.
C069 Name of the other source for fellowship
C090 Name of other outside source from which respondent received aid
C247 Other loan#2 name source other than Fed,St,Inst
C347 Other loan#3 name source other than Fed,St,Inst
C447 Other loan #4 name source other than Fed,St,Inst
C47b Other loan name #2-other schools that are not from Federal,State,Inst
C47c Other loan name #3-other schools that are not from Federal,State,Inst
C47d Other loan #4-other schls other than Fed,St,Inst
C48b Other loan #2-other schls other than Federal,State,Instit
C48c Other loan amount #3-other schools
C48d Other loan amount #4-other schools

CC47 Other loan name #1-other schools
CC48 Other loan amount #2-other schools
CC69 Other schls-name of the fellowship funded by other
CC90 Name of the other source of aid-other schools
CQ2s What other reasons for not accepting aid-verbatim
D134 Sponsor of prepayment plan-other specify verbatim
D25a Other types of assistance by parents-verbatim
E004 Important activities and duties at the S's job
E1OT Occupation verbatim text
E1IT Industry verbatim text for student
EJ15 Other thing student did to find job-verbatim
F219 Other graduate and professional tests taken-text
F286 Find future job-other specify verbatim response
F389 Level certified/eligible to teach-othr specify
F488 Fields are you certified/eligible to teach-other verbatim response
F80b Major at graduate school-verbatim text
G102 S other race-verbatim
G104 Other Hispanic origin-verbatim
G105 Other Asian/Pacific Islander descent-verbatim
G109 Other language spoken most often in S's home-text
L034 Other source of support-verbatim
L075 Other type of ln recvd by parents for S's educ
L38b Other sponsor of the tuition prepaymt plan-text
N002 Occupation verbatim text-parent respondent
N003 Industry verbatim text-parent respondent
NP93ID Computed NPSAS identifier
NY02 Occupation of spouse - verbatim text
NY03 Industry spouse-verbatim text
P1sp Other race of parent-verbatim text
P3sp Other type of Hispanic descent-verbatim
P4sp Other type of Asian/Pacific Islander-verbatim
Q2s Didn't apply for aid-some other reason verbatim
Q2ss Any other reason for not applying for aid-verbatim
R7s Assist in selecting school-other verbatim
R9s Help in job search-other verbatim text

B&B STUDENTS

AX17 Major GPA at sample school
AX88 Estimate major GPA-scale of 25.0 to 100.0
AX89 Estimate major GPA-scale of 1.0 to 10.0
AX90 Estimate of major GPA-scale of 1.0 to 4.0
B029 Attend other school #1 prior to 7/1/92
B30A Other school #1-IPEDS code-prior 7/1/92
B30B Other school #1-level-prior to 7/1/92
B30C Other school #2-IPEDS code-prior 7/1/92
B30D Other school #2-level-prior to 7/1/92
B30E Other school #3-IPEDS code-prior to 7/1/92
B30F Other school #3-level-prior to 7/1/92
B30G Other school #4-IPEDS code-prior to 7/1/92
B30H Other school #4-level-prior to 7/1/92
B30I Other school #5-IPEDS code-prior to 7/1/92
B30J Other school #5-level-prior to 7/1/92
B32C Other school #1-control-prior to 7/1/92
B32G Other school #2-control-prior to 7/1/92
B32K Other school #3-control-prior to 7/1/92
B32O Other school #4-control-prior to 7/1/92
B32S Other school #5-control-prior to 7/1/92
BA29 Attend other school #2 prior to 7/1/92
BB29 Attend other school #3 prior to 7/1/92
BC29 Attend other school #4 prior to 7/1/92
BD29 Attend other school #5 prior to 7/1/92
C093 Respondent receive any financial aid for educ prior to 7/1/92
C096 Receive grants, schlrshps, fllwshps, tuit. waiver before 7/1/92
C100 Respondent receive aid from other sources prior to 7/1/92
CX92 Respondent receive financial aid for educ prior to 7/1/92
E14A To find a job-sent out resumes
E14B To find a job-went to campus job placement
E14C To find a job-looked through want ads
E14D To find a job-asked friends
E14E To find a job-asked family
E14F To find a job-asked professors
E14G To find a job-attended recruiting fairs
E14H To find a job-did volunteer work in field
E14I To find job-looked at unemployment office
E14J To find job-used employment agcy/prof recruiters
E14K To find a job-placed a want ad
E14L To find a job-subscribed to trade journals
E14M To find a job-did nothing
E14N To find a job-other
EX14 Attempted to change/obtain job since graduating
F01A Satisfied with the ability of instructors
F01B Satisfied with classroom buildings, library, equip
F01C Satisfied with intellectual life of the school
F01D Satisfied with the course curriculum
F01E Satisfied with social life of the school
F01F Satisfied with his/her intellectual growth
F01G Satisfied with educ, considering overall cost
F01H Satisfied with reputation of school
F01I Satisfied with security measures taken (B&B only)
F050 Program type expected or enrolled in 1993-94
F053 Year S first contacted grad school for admission
F055 Month first applied to grad/professional school
F056 Number of graduate/professional schools applied to
F059 Admission acceptance at first choice grad school
F061 Attending graduate/professional school #1
F062 Month start to attend grad/professional school #1
F063 Applied for aid grad/professional schl #1
F064 Awarded/offered aid at grad /prof school #1
F067 Admission acceptance at 2nd choice grad school
F069 Attended graduate/professional school #2
F070 Month start to attend grad/professional schl #2
F071 Applied for aid at grad/professional school #2
F072 Awarded/offered financial aid at grad/prof schl #2
F073 Number of grad/prof schools accepted at
F074 Plan to attend other grad or professional school
F077 Month will start/started at grad/professional schl
F078 Applied for aid at other grad /professional schl
F079 Awarded/offered aid at other grad/prof school
F083 Next 12 months, plan to work full or part time
F084 Expect job to relate to program in next 12 mnths
F085 Does respondent have a firm job offer

F087 S has a teaching certificate or eligible to teach
F090 Expect to teach during 1993-94 academic year
F091 Number of applications for teaching positions
F093 Respondent offered a teaching position
F094 Respondent accepted a teaching position
F11A Ever used the personal counseling services
F11B Ever used the academic counseling services
F11C Used the financial aid counseling services
F11D Ever used career or job counseling services
F11E Ever used job placement services at sample school
F11F Ever used cultural, music, art or drama facilities
F11G Ever used sports and recreation facilities
F124 Plan to marry or live as married in next 12 months
F125 Plan to have or adopt children in next 12 months
F12A Satisfied with personal counseling service
F12B Satisfied with academic counseling service
F12C Satisfied with financial aid counseling service
F12D Satisfied with career or job counseling services
F12E Satisfied with the job placement services
F12F Satisfied with cultural, music, drama facilities
F12G Satisfied with the sports recreation facilities
F13A Used personal counseling services, 1992-93
F13B Used academic counseling services, 1992-3, at
F13C Used financial aid counseling services, 1992-93
F13D Used career or job counseling services, 1992-93
F13E Used job placement services during 1992-93
F13F Used cultural, art, drama facilities, 1992-93
F13G Used sports or recreation facilities, 1992-93
F255 Year first applied to a graduate/professional
F262 Year start to attend graduate/professional schl #1
F270 Year start to attend graduate/professional schl #2
F277 Year start to attend other graduate school
F57L Level of graduate/professional school #1
F58C Control of graduate/professional school #1
F65L Level of graduate/professional school #2
F66C Control of graduate/professional school #2
F75L Level of grad/prof. school student attending
F76C Control of grad/prof. school student attending
F80A Major at graduate school-CIP field of study coding
F81A Shorter time period to finish the course
F81B Obtained financial aid needed at school
F81C Better chance of getting job at the school
F81D Costs other than tuition are less
F81E Tuition costs are less
F81F Some other cost reason
F81G Particular professor teaches there
F81H Friends or spouse attend this school
F81I Parents/guardians attended this school
F81J Parents/guardians wanted me to attend
F81K Other influence related reason
F81L Can work while attending school
F81M Can live at home
F81N Located where I want to settle
F81O Close to home
F81P Far away from home
F81Q Some other location reason
F81R Like campus surroundings
F81S Has good reputation
F81T Research conducted is of interest
F81U Lab facilities and equipment are excellent
F81V Offers course of study wanted
F81W Good reputation for placing graduates
F81X Other reputation related reason
F82A Degree necessary to obtain career goal
F82B Undecided about career
F82C Expand knowledge in field of study
F82D Family wanted me to attend
F82E Other person's encouragement
F82F Enjoy school, want to continue
F82G Easier to attend now, than later
F82H Parents would help pay
F82I Some other reason
F86A Find future job/sent out resumes
F86B Find job/went to campus job placement offices
F86C Find job/looked through want ads
F86D Find job/networked w/ family, friends, others
F86E Find job/looked through interviews
F86F Find job/attended recruiting fairs
F86G Find job/did volunteer/internship work in field
F86H Find job/job announcements-unemployment office
F86I Find job/employment agency, prof. recruiters
F86J Find job/placed a want ad
F86K Find job/subscribed to trade journals
F86L Find job/did nothing
F86M Find job/other (specify)
F89A Levels certified/eligible to teach-preschool
F89B Levels certified/eligible to teach-kindergarten
F89C Levels certified/eligible to teach-first grade
F89D Levels certified/eligible to teach-second grade
F89E Levels certified/eligible to teach-third grade
F89F Levels certified/eligible to teach-fourth grade
F89G Levels certified/eligible to teach-fifth grade
F89H Levels certified/eligible to teach-sixth grade
F89I Levels certified/eligible to teach-seventh grade
F89J Levels certified/eligible to teach-eighth grade
F89K Levels certified/eligible to teach-ninth grade
F89L Levels certified/eligible to teach-tenth grade
F89M Levels certified/eligible to teach-eleventh grade
F89N Levels certified/eligible to teach-twelfth grade
F89O Levels certified/eligible to teach-special educ
F89P Levels certified/eligible to teach-bilingual
F89Q Levels certified/eligible to teach-administrative
F89R Levels certified/eligible to teach-counseling
F89S Levels certified/eligible to teach-other specify
F96A Decide to work-did not want additional educ debt
F96B Decide to work-support family/pay fin obligation
F96C Decide to work-didn't receive financial aid
F96D Decide to work-personal reasons other than money
F96E Decide to work-failed to meet application deadline
F96F Decide to work factor-not admitd to schl of choice
F96G Decide to work factor-want break from school
F96H Decide to work-good job opp. / military commitment
F96I Factor for work-career plans indefinite
F96J Decide to work-need work expernce before grad schl
F96K Decide to work factor-some other reason
F97A Factor for future work-previous experience in area
F97B Factor for future work-good income to start
F97C Factor for future work-good income potential
F97D Factor for future work-job security
F97E Factor for future work-prestige and status
F97F Factor for future work-interesting work
F97G Factor for future work-intellectually challenging
F97H Factor for future work-freedom to make decisions
F97I Factor for future work-interaction with people
F97J Factor for future work-work independent of others
F97K Factor for future work-allows great deal of travel
F97L Factor for future work-allows establishment roots
F97M Factor for future work-time for non-work activity
FI57 First choice grad/first-prof school-IPEDS code
FI65 Second choice grad/first-prof school-IPEDS code
FI75 Other choice grad/first-prof school-IPEDS code
FX86 Is respondent looking for work
G034 Hours of comm. service/volunteer work past 2 years
G97A Important or not-becoming authority in field
G97B Important or not-influencing political structure
G97C Important or not-being very well-off financially
G97D Important or not-owning own business
G97E Important or not-being successful in line of work
G97F Important or not-being able to find steady work
G97G Important or not-being a leader in the community
G97H Important/not-living close to parents & relatives
G97I Important or not-getting away from area grew up
G97J Important/not not-have leisure time for interests
G97K Important or not-having children
G97L Important or not-giving kids better opportunity
PBM1 Other school #1-month/year of first enrollment (up to 5 schools)
PEM1 Other school #1-month/year of last enrollment (up to 5 schools)

U88A Fields certified/eligible to teach

PARENT INTERVIEWS

ICD2 Industry code-spouse
ICDE Industry code-parent respondent
L001 Marital status of parent respondent
L004 Amount P contributed to students school expenses
L005 Other relatives, friends, family contrib.
L006 Amt contributed by other relatives, friends
L007 Amount loaned by parents to S for school expenses
L009 Provide S with addtnl help, other than money
L010 Amt of addtl support provided, other than money
L037 Parent use tuition prepayment plan
L038 Sponsor of the tuition prepayment plan used
L039 Parent particip. in U.S. savings bond program

CATI Data Elements

L041	Grade of S when parents started saving for schl
L051	Amount of PLUS loan
L053	Amount of the state-sponsored parent loan
L055	Amount of the school-sponsored parent loan
L057	Amount of the signature loan
L059	Amount of the home-equity loan
L061	Amount of the line of credit
L063	Amount of loan against a life insurance policy
L065	Amount of the commercial loan
L067	Amount of loan from non-profit underwriter
L069	Amount of Family Educ Loan from Sallie Mae
L071	Amount of loan against a retirement fund
L073	Amount of loan from a former spouse/friend
L076	Amount of other type of loan
L078	Has student taken out a loan for his/her educ
L079	Extent parents will help repay student's loans
L081	Extent to which student repays parents loans
L11A	Provide student with housing
L11B	Provide student with meals
L11C	Provide student with clothing
L11D	Provide student with charge cards
L11E	Provide help with student's auto loans
L11F	Provide student with help to automobile repairs
L11G	Provide student with any type insurance
L19A	Use money fm savings, money markets, or CDs
L19B	Use money from a trust fund for school expenses
L19C	Use stocks, bonds, or mutual funds for educ
L19D	Use money from other real estate investments
L19E	Use life insurance policies for educ
L19F	Use some other source for students educ costs
L20A	Savings, CDs set aside for stdnt's educ
L20B	Trust fund set up specifically for student educ
L20C	Stocks, bonds, set up for stdnt's educ
L20D	Other real estate investmnts for stdnt's educ
L20E	Life insurance policies set up for student's educ
L20F	Other source set up for student's educ
L21A	Name on account-savings, money mkts, CDs
L21B	Name on account-trust fund
L21C	Name on account-stocks, bonds, mutual funds
L21D	Name on real estate investments
L21E	Name on life insurance policies
L21F	Name on account-other source of support
L42A	Take out a second mortgage for educ expenses
L42B	Take on an extra job to help with educ expenses
L42C	Work more hours per week at job for educ expenses
L42D	Use income from your regular job for educ expenses
L42E	Use funds previously for retirement for educ
L42F	Borrow money, e.g.home equity or line for educ
L50A	Take out a PLUS loan
L50B	Take out a state-sponsored parent loan
L50C	Take out a school-sponsored parent loan
L50D	Take out a signature loan
L50E	Take out a home equity loan
L50F	Take out a line of credit
L50G	Take out a loan against a life insurance policy
L50H	Take out a commercial loan
L50I	Take out a loan from non-profit underwriter
L50J	Take out a Family Educ Loan from Sallie Mae
L50K	Take out a loan against a retirement fund
L50L	Take out a loan from an ex-spouse, other relative
L50M	Take out any other type of loan not mentioned
LX10	Est. of amt. of addtn'l non-money support by Ps
LXX4	Estimate of Par contribution to school expenses
LXX6	Est. of amt. contrib. by ex-spouse, other friends
LXX7	Estimated amount loaned to student for school exp
M001	Was the student a dependent of the parent
M002	Number of dependents parents supported
M004	Num. of Ps' dependents in schl at least halftime
M006	Amt. pd for educ expenses for all dependents92-93
M007	Number of children who have attended a PSE
M008	Dependents in second./elem. school with tuition/fees, in 1991
M009	Num. of depends in elem/secondary school w/ tuition/fees in 91
M010	Tuition and fees paid for elementary/secondary schools in 1991
MX08	Dpndnts in elementary/secondary school w/ tuition/fees in 92
MX09	Num. dependents in secondary/elem. school w/ tuition/fees-92
MX10	Tuition and fees paid for elementary/secondary schools in 1992
N004	Employed at any time during the calendar year 1992
N005	During 1992, #weeks parent respondent not employed
N008	Est. 91 total income, all sources-groupings
N010	Est household's average monthly living cost 1992
N011	Total value of cash/checking accounts in May 1992
N012	Total value of retirement/pension accounts-May 92
N014	Amount still owed on home in May 1992
N015	Total value of business, including farms-May 1992
N016	Amount still owed on business/farms-May 1992
N019	Total of other real estate & investments-5/92
N01A	Is parent respondent retired
N020	Amount owed other real estate & investments-5/92
N022	Any of this money for educ of parent/spouse
N023	This money for educ of parent's other children
N025	Any of money for educ was for sample student
N028	Of total amount borrowed for educ, amount owed
N030	Currently, amount owed on all other debt
N032	Tax form filed for 1991
N033	Total number of exemptions for 1991
N034	Total 1991 income from all jobs
N035	Est. of 91 parent inc., all jobs-grouping> $30K
N036	Spouse total income from all jobs in 1991
N037	Est spouse 1991 job income-more/less than $30K
N039	Amount of other taxable income in 1991
N043	Parent certified as dislocated worker in 1/92-4/93
N044	Steadily employed full-time for last 5 years
N045	Parent working unpaid at home instead of working
N046	Past 5 yrs, dpndnt on pub. assstnce/oth. fam.
N048	Is parent unemployed/underemployed
N049	Is parent having difficulty upgrading employment
N053	Claim student as tax exemption in 1989
N054	Claim student as tax exemption in 1990
N055	Claim student as tax exemption in 1991
N108	Est. P 92 income from all sources-groupings>= $30K
N134	Total income from all jobs in 1992
N135	Estimate of 1992 job income-groupings > $30,000
N136	Spouse's total 1992 income from all jobs
N137	Est. of spouse 92 inc from all jobs-> $30K
N503	Estimate of income tax liability for 1991
N55A	Claim student as tax exemption in 1992
N5X2	Total income tax liability for 1991
N600	Is respondent the student's mother or father
NA27	Amt. of money borrowed for educ-all family members
NB07	Parent 1991 total income from all sources
NB13	Total value of home-May 1992
NB21	Parent borrow money for educ for anyone in family
ND13	Total value of home-currently
NE11	Total cash/saving/checking accounts-currently
NE12	Value of retirement/pension accounts-currently
NE14	Amount still owed on home-currently
NE15	Total value of business, including farms-currently
NE16	Amount still owed on business/farms-currently
NE19	Tot current value other real estate & investments
NE20	Amount owed on other real estate & investments
NP15	Refinancing done on other real estate-May 92
NR09	Household's average monthly living costs in 92
NS07	Parent 1992 total income from all sources
NS15	Refinance of real estate other than primary home
NX11	Estimate value of cash/saving/checking May 1992
NX13	Estimate of value of retirement/pension May 1992
NX14	Estimate of value of home-May 1992
NX15	Estimate of the amount owed on home-May 1992
NX16	Estimate value of business/farms-May 1992
NX17	Estimate the amount owed on business/farm
NX20	Est value other real estate& investments- 5/92
NX21	Amt owed on othr real estate& investmnts- 5/92
NX31	Estimate amount owed on all other debt
NX32	Answers to tax questions 91 tax form or estimated
NX34	Estimate total 1991 income from all jobs
NX35	Est. of 1991 income from all jobs-groupings
NX37	Est. of spouse's 1991 job income-groupings
NX38	Est. of spouse's 1991 job income-groupings
NX40	Estimate of other taxable income in 1991
NX41	Received food stamps in 1991
NX43	Value of the food stamps received in 1991
NX44	Received Social Security in 1991
NX45	Received AFDC or ADC in 1991
NX46	Received child support in 1991
NX47	Received any other untaxed income in 1991
NX48	Total amount of untaxed income received in 1991
NX49	Est of the total untaxed income received 1991
NXX8	Est. 1991 total income, from all sources

CATI Data Elements

NY04	Spouse employed at any time during 1992
NY05	Weeks spouse not employed, 1992
NY11	Estimated current value of cash/savings/checking
NY13	Estimated current value of retirement/pension
NY14	Estimated value of home-currently
NY15	Estimated current amt owed on value of home
NY16	Estimated value of business/farms-currently
NY17	Estimated amount owed on business/farms-currently
NY1A	Spouse retired
NY20	Estimate current other real estate and investment
NY21	Est. current amount owed on other real estate and
NY34	Estimated parent's total inc from all jobs 1992
NY35	Estimated 1992 job income-groupings
NY37	Estimated spouse's 1992 job income-groupings
NY38	Est. spouse's 1992 income all jobs-groupings
NY39	Estimate of other taxable income in 1992
NY40	Estimated range of other taxable income in 1992
NY43	Spouse certified as a dislocated worker
NY44	Spouse employed full-time for the last five years
NY45	Spouse unpaid work at home, instead of work-5 yrs
NY46	Spouse dpnds on public aid/family, last 5 yrs.
NY48	Spouse unemployed/underemployed
NY49	Spouse having difficulty in upgrading employment
NYX7	Estimated P's total 1992 income from all sources
NYX8	Estimate of 1992 total income
NZ41	Received food stamps in 1992
NZ43	Value of the food stamps received in 1992
NZ44	Received Social Security in 1992
NZ45	Received AFDC or ADC in 1992
NZ46	Received child support in 1992
NZ47	Received any other untaxed income in 1992
NZ48	Total amount of untaxed income received in 1992
NZ49	Estimated amount of total untaxed income for 1992
OCD2	Occupation code-spouse
OCDE	Occupation code-parent respondent
P001	Race of the parent
P002	Is parent of Hispanic origin
P003	Type of Hispanic descent of parent
P004	Type of Asian/Pacific Islander descent
P005	In what year was parent born
P006	Highest level of educ parent has completed
PJ06	Did parent earn an Associate's degree
PK06	Did your parent's spouse earn Associate's degree
PX05	In what year was parent's spouse born
PX06	Highest level of educ your parent's spouse
Q001	Student applied for financl aid for educ after HS
Q2A	Didn't apply for aid-family/student could pay
Q2B	Didn't apply for aid-not willing to go into debt
Q2C	Didn't apply for aid-family income too high
Q2D	Didn't apply for aid-student's low grades
Q2E	Didn't apply for aid-too difficult to apply
Q2F	Didn't apply for aid-not want to tell finances
Q2G	Didn't apply for aid-ineligible, part-time
Q2H	Didn't apply for aid-no money available
Q2I	Didn't apply for aid-missed application deadline
Q2J	Didn't apply for aid-didn't know about fin aid
Q2K	Didn't apply for aid-other reason
R004	Have you discussed graduate school with student
R005	Is student planning/attending graduate school
R006	Assist student in selecting a graduate school
R008	Help student look for job in the past year
R011	Who completed the parent interview
R1A	Consider the graduation rate at sample school
R1B	Consider the campus crime rate at sample school
R1C	Consider the job placement rate at sample school
R7A	Assisted in selecting school-visited campuses
R7B	Assisted in selecting school-letters of recommend
R7C	Assisted in select schl-paid for visits to campus
R7D	Assisted in selecting schl-bought/reviewed guide
R7E	Assisted selecting schl-wrote to schl for info.
R7F	Assisted selecting school-asked others for info
R7G	Assisted in selecting school-other
R9A	Helped with job search-helped send out resumes
R9B	Helped with job search-looked through want ads
R9C	Helped with job search-asked friends/relatives
R9D	Helped in job search-solicited letters of recommendation
R9E	Helped in job search-gave S money for support
R9F	Helped in search-paid for printing business cards
R9G	Helped in job search-bought student a suit/clothes
R9H	Helped in job search-assisted in paying for travel
R9I	Helped job search-looked at job boards-own company
R9J	Helped job search-employment agency, recruiters
R9K	Helped with job search-campus job placement office
R9L	Helped job search-assisted S in attending fairs
R9M	Helped in job search-encouraged S to use want ads
R9N	Helped in job search-subscribed to trade journals
R9O	Helped in job search-did nothing
R9P	Helped in job search-other
ST1	State of legal residence

Derived Variables

DERIVED VARIABLES [ALL STUDENTS]

ACT	Act Composite Score
Actvduty	On Active Duty in United States Military
Admreq1	Require Hs Diploma/equivalent (Ipeds)
Admreq10	Require Toefl or Equivalent (Ipeds)
Admreq2	Require Hs Class Standing (Ipeds)
Admreq3	Require Test Scores (Ipeds)
Admreq4	Require Sat (Ipeds)
Admreq5	Require Act (Ipeds)
Admreq6	Require Other Test (Ipeds)
Admreq7	Require Residence (Ipeds)
Admreq8	Require Ability to Benefit (Ipeds)
Admreq9	Require Age (Ipeds)
Affiltn	Affiliation
Anyhilvl	Highest Level of Educ Ever Expect to Complete
Calsys	Calendar System (Ipeds)
Cenrace	Race of Student (Census Categories)
Complpgm	Degree Program Completed During 1992-93
Comserhr	Student's Current Hours/week
Comserv1	Ever Done Any
Credhrs	Number of Credit Hours Taken During 1992-93
Datasrc	Data Collection Sources
Deafness	Hearing Impaired or Deaf
Disablty	Does Student Have Any Disabilities
Emwkhr2	Average Hours Worked/week 07/92---06/93
Emwkhr3	Avg Hours Worked/week When Enrolled 1992-93
Enlen	Number of Months Enrolled for During 1992-93
Enrl9192	Enrolled in a Pse Any Time During 91-92
Enrlcatb	Control & Size (Total Enrollment)
Enroll92	Enrollment in 1992
Evervote	Ever Voted in Any Election
Fampay	Family/student Could Pay
Fatheduc	Highest Level of Educ Completed by Father
Fconrel	Amount Others Paid for 1992-93 Costs
Fips	State Institution Is Located (Ipeds)
Futrcar2	Performed Other than During Npsas Year
Futrcare	Service Related to Future Career
Futrplan	What Does Student Plan to Be Doing next Year
Gender	Gender
Gpa	Grade Point Average (Cumulative)
Hardapp	Too Hard to Apply for Aid
Healtoth	Other Health Related Disabilities
Hiincome	Family Income Too High
Hrsperwk	Clock Hours Required per Week
Hsdeg	Type of High School Diploma
Hsgradyy	High School Graduation Year
Hstype	Type of High School Graduated from
Jobnum	Number of Jobs 1992-93
Learndis	Have a Specific Learning Disability
Lowgrade	Grades/test Scores Too Low
Majors	Major Field of Study
Majors2	Major Field of Study - Full Codes
Majors3	Major Field of Study
Misdline	Missed Application Deadline
Motheduc	Highest Level of Educ Mother Ever Completed
Noaidmon	No Money Available for Aid
Nodebt	Did Not Want Debt
Nodisclo	Did Not Want to Disclose Finances
Noeligbl	Attended School Part-time and Was Ineligible
Noenroll	Number of Terms Enrolled During 1992-93
Obereg	Region (Obe Code) of Institution (Ipeds)
Ortho	Have an Orthopedic or Mobility Limitation
Othdegrs	Num Other Degrees, Licenses, Certificates
Otherany	Reason No Apply for Aid-any Other Reason
Pareduc	Highest Educ Level Completed by Either Par
Presvote	Vote in the 1992 Presidential Election
Pstsecyr	Year First Enrolled in Pse
Race	Race and Ethnicity of Student
Racesex	Race/ethnicity & Gender
Ratecrim	Consider Campus Crime Rate Decide to Attend
Rategrad	Consider Graduation Rate Deciding to Attend
Rateplac	Consider Job Placement Deciding to Attend
Regvote	Registered to Vote in the Us
Remmath	Remedial Help in Mathematics During 1992-93
Remread	Remedial Help in Reading During 1992-93
Remstsk	Remedial Help with Study Skills in 1992-93
Remwrite	Remedial Help in Writing During 1992-93
Samhilvl	Highest Level of Educ Expected to Completed
Sampstat	Comparable to 1986-87 Npsas
SATM	SAT Score-math Section
Sattotal	SAT Score-composite Score
Satv	SAT Score-verbal Section
Savbonds	Use Us Savings Bonds for 92-93 Expenses
Saveschl	Funds Used for 1992-93 School Expenses, Amount from Personal Savings
Servclas	Was Any Service Required by Classes
Servcur	Community Service in 1992-93
Servfutr	Plan to Do Community Serv in next 12 Months
SNOAPP1	Why student did not apply for aid-1st resp
snoapp2	Why student did not apply for aid-2nd resp
snoapp3	Why student did not apply for aid-3rd resp
SPEECH	Have a speech disability or limitation
SPSEMP	Spouse employed
STSAVPLN	Use a college prepayment plan
STUIND1	Industry coding
STUOCC1	Occupation coding
TRANSFER	Transfer to sample school during the NPSAS
UNSAFE	How often concerned about personal safety
VETERAN	Veteran of US armed forces
VISUAL	Vision impairment or legally blind keeper
MOSTEMPL	Number of months for longest job held
APPRTSHP	Participate in an apprenticeship program
COOPPROG	Participate in a cooperative educ program
INTRNSHP	Participate in an internship/practicum
COMPTYPE	Type of company or organization S worked for
JBMAJREL	How close job related to major/area of study
JOBLOCAT	Job on or off campus
JOBMAJOR	Job related to current major
JOBLOOK	Availability for employment status of std
LOANDFLT	Respondent in default on a fed loan/grant
YRRECAID	Beginning in 1987-88, year first receive federal financial aid
FOODSTMP	S or S's parents get food stamps since Jan 92
ST_TIME	Total elapsed time to complete S interview
CDAT	Date completed interview/date of last contact
ZACT	Data source for derived variable ACT
ZCENRACE	Data source for derived variable CENRACE
ZCREDHR	Data source for derived variable CREDHRS
ZGENDER	Data source for derived variable GENDER
ZHRSPER	Data source for derived variable HRSPERWK
ZHSDEG	Data source for derived variable HSDEG
ZLENGTH	Data source for derived variable LENGTHCL
ZMAJOR2	Data source for derived variable MAJORS2
ZNOENRL	Data source for derived variable NOENROLL
ZRACE	Data source for derived variable RACE
ZSATTTL	Data source for derived variable SATTOTAL
ZSPSEMP	Data source for derived variable SPSEMP
ZVETERN	Data source for derived variable VETERAN
LENGTHCL	Length of clock hour program

B&B STUDENTS

ASSIST1	Parent help select grad school-visit campus
ASSIST2	Parnt help select grad schl-solicited lettrs
ASSIST3	Parnt help select grad schl-paid for trips
ASSIST4	Parnt help select grad schl-purchased guides
ASSIST5	Parent assist selecting grad schl-wrote to school for information
ASSIST6	Parent assist selecting grad school-asked info of those that attended
ASSIST7	Parent assist selecting grad school-other
BECMAUTH	Become authority in given field
BETTRJOB	Better chance to get job at school
COSTLIVE	Other living costs were less
COURSOFF	Offered course of study wanted
ENROLL1	Enroll in grad school-advanced degree needed
ENROLL2	Enroll in grad school-undecided about career
ENROLL3	Enroll in grad school-expand knowledge field
ENROLL4	Enroll in grad school-parents wanted S to go
ENROLL5	Enroll in grad school-others wanted S to go
ENROLL6	Enroll in grad school-enjoy school
ENROLL7	Enroll in grad school-easier now than later
ENROLL8	Enroll in grad school-parents will help pay
ENROLL9	Enroll in grad school-some other reason
FACTORA	Previous work experience in the area
FACTORB	Good income to start
FACTORC	Job security and performance
FACTORD	Work that seems important/interesting
FACTORE	Freedom to make own decisions
FACTORF	Meeting/working with friendly people
FACTORG	Good income potential over career
FACTORH	Prestige and status
FACTORI	Intellectually challenging work
FACTORJ	Able to work independently
FACTORK	Allows a great deal of travel
FACTORL	Allows roots to be established
FACTORM	Time for extracurricular activity

Derived Variables

facwrk1	Factor for working next year-first response
facwrk2	Factor for working next year-second response
facwrk3	Factor for working next year-third response
FARAWAY	School was far away from home
FINAID	Obtained financial aid needed
FINDJB01	Find current job-sent out resumes
FINDJB02	Find job-went to campus placement office
FINDJB03	Find current job-looked through want ads
FINDJB04	Find current job-asked friends
FINDJB05	Find current job-asked family
FINDJB06	Find current job-asked professors
FINDJB07	Find current job-attended recruiting fairs
FINDJB08	Find current job-did volunteer work in field
FINDJB09	Find current job-job boards in unemp office
FINDJB10	Find current job-contacted employment agncy
FINDJB11	Find current job-placed want ad
FINDJB12	Find current job-subscribed to trade journls
FINDJB13	Find current job (y/n)-nothing
FINDJB14	Find current job (y/n)-other
FINDWORK	Be able to find steady work
FRIENDAT	Friends attended the school
GD_REP	School has good reputation
GETAWAY	Get away from this area of country
GIVEKIDS	Give own children better opportunity
GRADACP1	Admission acceptance at 1st choice grad schl
GRADACP2	Admission acceptance at 2nd choice grad schl
GRADACP3	Which choice of graduate/professional school will student be attending
grscfac1	Factor1 for entering grad school next year
grscfac2	Factor2 for entering grad school next year
grscfac3	Factor3 for entering grad school next year
HAVEKIDS	Have children
HELPJB01	Parent help job search-sent out resumes
HELPJB02	Parent help-looked through want ads
HELPJB03	Parent help job search-asked friends
HELPJB04	Parent help search-solict recommendations
HELPJB05	Parent help job search-gave money
HELPJB06	Parent help job search-paid for printing
HELPJB07	Parent help job search-bought S clothes
HELPJB08	Parent help job search-helped pay for travel
HELPJB09	Parent help job search-looked at job boards
HELPJB10	Parent help job search-contact emplymnt agcy
HELPJB11	Parent help search-went to campus placement
HELPJB12	Parent help search-attend recruiting fairs
HELPJB13	Parent help job search-placed want ads
HELPJB14	Parent help job search-looked at trade jrnls
HELPJB15	Parent help job search-did nothing
HELPJB16	Parent help job search-other
INFLUNCE	Select grad school-other influence reason
INRESRCH	Select grad school-research is interesting
JOBSCH01	Find future job-sent out resumes
JOBSCH02	Find job-went to campus placement office
JOBSCH03	Find future job-looked through want ads
JOBSCH04	Find job-asked family/friends/professors
JOBSCH05	Find job-opportunities through interviews
JOBSCH06	Find future job-attended recruiting fairs
JOBSCH07	Find future job-did volunteer work in field
JOBSCH08	Find job-looked job boards in unemp office
JOBSCH09	Find future job-contacted employment agency
JOBSCH10	Find future job-placed want ads
JOBSCH11	Find future job-subscribed to trade journals
JOBSCH12	Find future job-did nothing
JOBSCH13	Find future job-other specify
JOBSRC1	What doing to find future job-first response
JOBSRC2	What did to find future job-second response
JOBSRC3	What did to find future job-third response
LABEXCPT	Select grad school-lab facilities exceptnal
LEADCOMM	Be a leader in my community
LEISURE	Have leisure time to enjoy own interest
LIVCLOSE	Live close to parents and relatives
LIVEHOME	Select grad school-could live at home
LOCATION	Select grad school-othr location reason
OTHREASN	Other cost related reason
OWNBUSIN	Become successful in own business
PARENT	Select grad school-parents wanted S to go
PARNATT	Parent(s) attended the school
PJOBSR1	Help in job search (P)-first response
PJOBSR2	Help in job search (P)-second response
PJOBSR3	Help in job search (P)-third response
PLACEMNT	Good reputation for placing graduates
PLNWRK01	Factor for work-no additional educ debt
PLNWRK02	Factor for work-money to support family
PLNWRK03	Factor for work-didn't get financial aid
PLNWRK04	Factor for work-family/personal reasons
PLNWRK05	Factor for work-didn't meet applic. date
PLNWRK06	Factor for work-not admitd to schl of choice
PLNWRK07	Factor for work-want break from school
PLNWRK08	Factor for work-good job opportunity
PLNWRK09	Factor for work-career plans indefinite
PLNWRK10	Factor for work-need work experience
PLNWRK11	Factor for work-some other reason
POLSTRUC	Influence the political structure
PROFESSR	Certain professor teaches here
REPUTATN	Select grad school-some othr reputation reason
SCHCLOSE	Select grad school-close to home
SCHLNWRK	Select grad school-can go to school and work
schpik1	Parent assist selecting grad school-1st resp
schpik2	Parent assist in selecting grad schl-second
schpik3	Parent assist selecting grad school-third
selgrad1	Why select grad school-first response
selgrad2	Why select grad school-second response
selgrad3	Why select grad school-third response
SERVTHRS	Total hours of community servicelast 2 yrs
SETTLE	Located where respondent wants to settle
SHORTER	Shorter time period to finish the course
sjobsr1	What did to find current job-first resp
sjobsr2	What did to find current job-second resp
SJOBSR3	What did to find current job-third resp
SUCCESS	Be successful in line of work
SURROUND	Select grad school-like campus surroundings
TUITLESS	Tuition & other expenses were less
WELLOFF	Being very well off financially
WORKTIME	During next 12 months, S plan to work
wrkfut1	Factor for future work-first response
wrkfut2	Factor for future work-second response
wrkfut3	Factor for future work-third response keeper
ZGRADA2	Data source for derived variable GRADACP2
ZGRADA3	Data source for derived variable GRADACP3

GRADUATE STUDENTS

ACTVDUTY	Student: Military
ADDJOB	Needed money, worked or took additional job
AFFILTN	Institution: Affiliation
APPLOAN	Needed money, applied for loans
ASKPARNT	Needed money, asked for money/more money
ATTEND	Attendance status: Intensity
ATTNST3	Attendance status: Persistence status
ATTNSTAT	Attendance status: Persistence
BACKHOME	Needed money, moved back home
BETTRJOB	Why attend (S):Better chance to get job inst
BORAMT2	Amount student borrowed graduate educ
CALSYS	Institution: Calendar system (IPEDS)
COMSERHR	Community service: Current hours/week
COMSERV1	Community service: Ever done any
CONTROL	Institution: Control
COSTLIVE	Why attend (S): Other living costs were less
COURSOFF	Why attend (S): Offered courses wanted
CREDHRS	Attendance status: Credit hours
CTZNSHP	Student: Citizenship
CUTDOWN	Needed money, cut down on expenses
DADOC	Parents: Father's occupation
DATASRC	Sources--data collection sources
DEAFNESS	Disability: Hearing impaired or deaf
DISABLTY	Disability: Any
EARNSCHL	Fund source: Amount from own earnings
EM2ENRL	Employment/enrollment ratio: employed during month enrolled
EMPLPRD2	Employment, period (summer,term, both)
EMWKHR1	Employment, avg hrs work/week when employed
EMWKHR2	Employment, average hours worked 07/92-06/93
EMWKHR3	Employment, avg hrs worked when enrolled
ENEMPL	Employment, number of months (excludes CWS)
ENLEN	Enrollment, number of months
ENRLCATB	Institution: Control & size
ENROLL91	Institution: Enrollment in 1991
ENROLLED	Enrollment, plans for next year
FARAWAY	Why attend (S): School was far from home
FATHEDUC	Parents: Educ
FCONREL	Amount others paid for 1992-93 costs
FELLAMT	Funds: fellowship amount
FINAID	Why attend (S): Got financial aid needed
FIPS	Institution: State (IPEDS)
FRIENDAT	Why attend (S): Friends attended the school
FUTRCAR2	Community service: Prior
FUTRCARE	Community service: Current
GD_REP	Why attend (S): School has good reputation
GENDER	Student: Gender
GPA	Student: GPA (cumulative
HEALTOTH	Disability: Other health related
HOMEREGN	Student: Legal residence

Derived Variables

HSDEG	Student: High school degree or equivalent
HSGRADYY	Student: High school
JOBNUM	Employment, number of jobs 1992-93
LEARNDIS	Disability: Learning disability
LEVEL	Institution: Type
LIVEHOME	Why attend (S): Could live at home
LOANREL	Amount others loaned for 1992-93 costs
LOCALRES	Student: Local residence
MAJORS	Student: Major field of study
MARITAL	Student: Marital status
MOMOC	Parents: Mother's occupation
MOTHEDUC	Parents: Educ
NOENROLL	Attendance status: Terms/periods enrolled
NOSCH	Attend: number of institutions in 1992-93
NUMNEMPL	Employment, number of months (includes CWS)
OBEREG	Inst: Region (OBE code) of inst (IPEDS)
OFCON1	Institution: Type and control
ORTHO	Disability: Orthopedic limitation
PARENT	Why attend (S): Parents wanted S to go
PARNTATT	Why attend (S): Parents attended the school
PLACEMNT	Why attend (S):Good reputation placing grads
PROGTYP	Student: Degree program
PSTSECYR	Enrollment, year first enrolled in PSE
PSVCHOUR	Community service: Prior hours
RACDINC	Student: Race ethnicity
RACE	Student: Race/ethnicity
RACESEX	Student: Race/ethnicity & gender
REDUCELD	Needed money, reduced course load
REJCTAID	Reject financial aid-ever
SAMEPROG	Student: Plans to be in same prog in next yr
SAMEREGN	Student: Legal residence in same region
SAMESTAT	Student: Legal residence same as state
SAMPSTAT	Comparable to 1986-87 NPSAS
SAMPTERM	Sampled term
SAVBONDS	Fund source: Savings Bonds (US)
SAVESCHL	Fund source: Amount from own savings
SCHCLOSE	Why attend (S): School is close to home
SCHLNWRK	Why attend (S): Can go to school and work
SHORTER	Why attend (S): Could finish in shorter time
SPEECH	Disability: Speech limitation
SPERNSCH	Fund source: Amount from spouse earnings
SPSAVSCH	Fund source: Amount from spouse savings
STUIND1	Student: Job industry
STUOCC1	Student: Job occupation
TRANSFER	Needed money, transferred to cheaper school
TUITLESS	Why attend (S): Tuition & othr expenses less
VETERAN	Student: Veteran of US armed forces
VISUAL	Disability: Partially sighted or blind
WHRS1	Employment: Hours/week 92/07 (includes CWS)
WHRS10	Employment: Hours/week 93/04 (includes CWS)
WHRS11	Employment: Hours/week 93/05 (includes CWS)
WHRS12	Employment: Hours/week 93/06 (includes CWS)
WHRS2	Employment: Hours/week 92/08 (includes CWS)
WHRS3	Employment: Hours/week 92/09 (includes CWS)
WHRS4	Employment: Hours/week 92/10 (includes CWS)
WHRS5	Employment: Hours/week 92/11 (includes CWS)
WHRS6	Employment: Hours/week 92/12 (includes CWS)
WHRS7	Employment: Hours/week 93/01 (includes CWS)
WHRS8	Employment: Hours/week 93/02 (includes CWS)
WHRS9	Employment: Hours/week 93/03 (includes CWS)
WITHDRAW	Needed money, withdrew from school
WORKPROG	Employment plans for next year
WORKTIME	Employment plans, work full or part-time
XEMPL1	Employment/enrollment status (CWS) 92/07
XEMPL10	Employment/enrollment status (CWS) 93/04
XEMPL11	Employment/enrollment status (CWS) 93/05
XEMPL12	Employment/enrollment status (CWS) 93/06
XEMPL2	Employment/enrollment status (CWS) 92/08
XEMPL3	Employment/enrollment status (CWS) 92/09
XEMPL4	Employment/enrollment status (CWS) 92/10
XEMPL5	Employment/enrollment status (CWS) 92/11
XEMPL6	Employment/enrollment status (CWS) 92/12
XEMPL7	Employment/enrollment status (CWS) 93/01
XEMPL8	Employment/enrollment status (CWS) 93/02
XEMPL9	Employment/enrollment status (CWS) 93/03
ZHOMSTAT	Student: State of legal residence
ATTNST4	Attendance status:persistence and intensity
YRSINPSE	Number of years in postsecondary educ
COMPLPGM	Program completed during NPSAS year
ATTNST4	Attendance status:persistence and intensity
BABR	Received baccalaureate degree in NPSAS:93
AGE	Student: Age as of 12/31/92
AIDPACK	Package with grant
AIDRATIO	Ratio of total aid to total cost
AIDSRC1	Package with Title IV
AIDSRC2	Package with Federal financial aid
APPFORM	Financial aid application form used
ASSTAMT	Assistantship amount
ASTAMT	Assistantship amount (all types)
AVEEXP	Cost1: Average monthly household expenses
BOOKCOST	Cost1: Books and supplies
BORAMT1	Amount student borrowed undergraduate educ
CAMPAMT	Federal amount: Campus-based
CMBOOKS	Cost2: CM Books and supplies costs
CMBUDGET	Cost2: CM Non-tuition/fees total costs
CMCOSTS	Cost2: CM Total costs
CMDPNDNT	Cost2: CM Dependent costs
CMHANDCP	Cost2: CM handicapped allowance
CMMISC	Cost2: CM Miscellaneous costs
CMROOM	Cost2: CM Room and board costs
CMTRANS	Cost2: CM Transportation costs
CMTUIT	Cost2: CM Tuition and fees costs
CWSPAMT	Federal amount, CWS award amount
CWSPERND	Federal work: CWS earned
DEPEND	Student: Dependency status
DEPINC	Income, dependent student family 1991 AGI
EFC1	EFC: Recorded expected family contribution
EFC2	EFC: Derived expected family contribution
EFC3	EFC: Composite expected family contribution
EMPLYAMT	Total employer aid amount
EVERAPLY	Aid application for aid prior to 1992-93
FAMFARM	Family assets: Family farm owned
FAMINC	Family income: Income, adjusted gross 1991
FAMINCPR	Family income: Family income
FAMNUM2	Family, number (based on dependency status)
FARMVAL	Family assets: Farm value
FC3PCT	Need: Ratio, EFC3 to total cost
FED8791	Funds: Received federal aid in 1987-91
FEDAMT1	Federal loan: Total amount (except VA/DOD)
FEDAMT2	Federal loan: Total amount (incl VA/DOD)
FEDFINAN	Funds: Received federal aid in 1991-92
FEDLNCT	Federal loan: Total number (except ICL)
FEDPACK2	Funds: Package with federal aid
FEDPCT	Funds: Ratio of federal aid to total aid
FEDTAX2	Family income: Federal taxes paid REVISED
GRTLOAN	Funds: Ratio of grants to total loans
GRTPCT	Funds: Ratio of grants to total aid
GRTRATIO	Funds: Ratio of grants to grants and loans
HOMEQ	Home equity (based on dependency status)
INCOME	Family income: Income and dependency level
INDEPINC	Family income independ student & spouse 1991
INGRTAMT	Institution: Grant total
INJURIS	Cost1: Jurisdiction for tuition
INLNAMT	Institution: Loan total
INNEEDGR	Institution: Need-based grant amount
INNONDGR	Institution: Non-need-based grant amount
INOTHAMT	Institution: Other amount
INSTAMT	Institution: Total amount
INSTCWS	Institution: CWS amount
INSTNEED	Institution: Need-based amount
INSTNOND	Institution: Non-need-based amount
INSTPCT	Funds: Ratio of institution aid to total aid
LOANPCT	Funds: Ratio of loans to total aid
NONFMCST	Cost2: CM Cost minus EFC
NREFCON	Parent contribution: Total
NREFLOAN	Par contribution: Loan amount (non-referent)
OFFCOST	Cost1: Other off-campus expenses
OTHERAID	Other: Not federal/state/institution)
OTHERAMT	Other: Total aid amount
OTHERTAX	Taxes: Allowance for state & other taxes
OTHFDAMT	Federal amt: Other amount (including VA/DOD)
OTHGTAMT	Other: Grant total (not fed/state/inst)
OTHLNAMT	Other: Loan total (not fed/state/inst)
OTHRCOST	Cost1: Other educ expenses
OTHRMCST	Cost1: Other room expenses
OTHSCAMT	Total aid amount at other institutions
OWEAMT	Borrowed: Amount student still owed
PARCONTR	Parent contribution: Total
PAREDUC	Parents: Educ
PARLOAN	Parent contribution: Loan amount total
PERKAMT	Federal loan: Total Perkins amount
PLUSAMT	Federal loan: PLUS amount
POSTED	Family, postsecondary educ number
PRICE1	Total cost minus total grants
PRICE2	Total cost minus total grt minus 1/2 tot ln
PRICE3	Need: Total cost minus total aid
REFCONTR	Parent contribution: Total
REFINC91	Family income: Parent income 1991
REFINC92	Family income: Parent income 1992
REFLOAN	Parent contribution: Loan amount (referent)

Derived Variables

REFPAR	Parent, referent for aid purposes
RESAMT	Funds: Research assistantship amount
RNEED1	Total cost minus EFC3
RNEED2	Total cost minus EFC3 minus tot fed aid
RNEED3	Total cost minus EFC3 minus tot fed grt
RNEED4	Total cost minus EFC3 minus total aid
RNEED5	Tuition and fees minus EFC3
RNEED6	Total cost minus EFC3 minus total grants
ROOMCOST	Cost1: Room and board expenses
SAI	Student aid index (SAI/PGI)
SCHOLAMT	Total scholarship total amount
SEXDINC	Gender dependency & income
SINGLPAR	Student: Single parent
SLSAMT	Federal loan: SLS amount
SPSINC	Family income: Spouse's income
STAFFAMT	Federal loan: Stafford amount
STAFPACK	Funds: Package with Stafford loans
STAPCT	Funds: Ratio of state aid to total aid
STATEAMT	State: Total amount
STATNEED	State: Need-based amount
STATNOND	State: Non-need-based
STGTAMT	State: Grant total
STLNAMT	State: Loan total
STOTHAMT	State: Other total amount
STSAVPLN	Fund source: Savings plan (State)
T4AMT1	Federal loan: Title IV (except PLUS)
T4AMT2	Federal loan: Title IV (including PLUS)
T4PK1AMT	Fund source: Amount from Pell
TCOSTPR	Cost1: Total cost
TCOSTPR2	Cost1: Total cost
TEACHAMT	Funds: Teaching assistantship amount
TFEDAID	Federal amount: Total amount
TFEDGRT	Federal grant: Total amount
TFEDLN	Federal loan: Total amount (except PLUS)
TFEDOTHR	Federal amount: Other amount (incl PLUS)
TITIVAMT	Federal amount: Title IV amount
TNFEDAID	Total Non-Federal: Total aid amount
TNFEDGRT	Total Non-Federal: Grants amount
TNFEDLN	Total Non-Federal: Loans amount
TNFEDOTH	Total Non-Federal: Other amount
TOTAID	Total aid amount
TOTCOST	Cost1: Total cost 1992-93
TOTGRT	Total grant amount
TOTLOAN	Total loan amount
TOTOTHR	Other: Not grant/loan/CWS (includes PLUS)
TOTWKST	Total work-study amount
TUITCOST	Cost1: Tuition & fees total 1992-93
UNTAXINC	Family income: Income, untaxed
WAIVAMT	Total tuition waiver amount
WKINC	Family income: Student income
WKINCCAL	Family income: Student income
WORKPCT	Funds: Ratio of work-study to total aid
AIDAPP	Funds: Applied for Financial AId
DEPEND2	Student: CM dependency status
CMPC	EFC: CM Parental contribution for dependents
CMSC	EFC: CM student contribution
MAXLOAN	Maximum Stafford Loan amount allowed
TOTLOAN2	Total loans incl from parents & relatives
CMNEEDA-J	Need2: S Budget minus EFC and aid amounts
MERITAID	Total non-need based grants
UNUSEDLN	Unused Stafford Loan Eligibility
STBUDGET	COST4: Standard student budget
AIDAPP	Funds: Applied for Financial AId
DEPEND2	Student: CM dependency status
CMPC	EFC: CM Parental contribution for dependents
CMSC	EFC: CM student contribution
MAXLOAN	Maximum Stafford Loan amount allowed
FEDTAXES	Family income: Federal taxes paid
NETPRC1	Cost: Total minus fed. grants
NETPRC10	Cost: Total minus institution grants
NETPRC11	Cost: Total minus inst grt + half st ln
NETPRC12	Cost: Total minus institution aid
NETPRC2	Cost: Total minus fed. grnt + half loans
NETPRC3	Cost: Total minus federal aid
NETPRC4	Cost: Total minus state & fed. aid
NETPRC5	Cost: Total minus fed grt + half st/fed ln
NETPRC6	Cost: Total minus non-federal aid
NETPRC7	Cost: Total minus state grants
NETPRC8	Cost: Total minus st grt + half st loans
NETPRC9	Cost: Total minus state aid
NONTUIT	Cost: Room, board&other costs(non-tuition)
NUMDEPND	Family: Number of dependents
NUMFEDLN	Funds: Number of federal loans
RMBDCOST	Cost: Room and board on/off campus
SLS_STAF	Funds: SLS and Stafford amount
TFESTGRT	Funds: Total federal and state grants
TFESTLN	Funds: Total federal and state loans
TOTFEDST	Funds: Total federal and state aid
WORK9293	Employment: Outside job (not CWS)

VERBATIM ITEMS

MAJORS	Major field of study
NP93ID	Student CATI id
STUIN_TX	Label for Industry coding
STUOCC1	Occupation coding
MAJ_TEXT	Label for Major field of study
STUIND1	Industry coding-
STUOC_Tx	Label for Occupation coding

PARENTS

BONDPROG	US Educ Savings Bonds
DADOC	Father's occupation
EDTRUST	Used money from trust fund
MOMOC	Mother's occupation
NP93ID	Student CATI id
OTHFUNDS	Use some other source for student's educ costs
PREPAY	Used tuition prepayment plan
BORROW	Borrow money, such as home equity, for educ exp
COMMLOAN	Take out a commercial loan
CREDLOAN	Obtained a line of credit
CURINC	Use income from regular job for educ expenses
EDSAVING	Use money from savings,money markets,CDs
HOMELOAN	Obtained a home equity loan
LIFELOAN	Obtained loan against a life insurance policy
MOREHRS	Worked more hours at job(s) for educ expenses
MOREJOBS	Take extra job to help with educ expenses
NOAPP01	Didn't apply for aid (P)-family/stu could pay
NOAPP02	Didn't apply (P)-family/student not want debt
NOAPP03	Didn't apply for aid (P)-family income too high
NOAPP04	Didn't apply for aid (P)-low student grades
NOAPP05	Didn't apply for aid (P)-too difficult to apply
NOAPP06	Didn't apply (P)-not want to disclose finances
NOAPP07	Didn't apply (P)-student was part-time status
NOAPP08	Didn't apply for aid (P)-no money was available
NOAPP09	Didn't apply (P)-missed deadline for application
NOAPP10	Didn't apply (P)-didn't know about financial aid
NOAPP11	Didn't apply for aid (P)-other reason
OTHRLOAN	Take out any other type of loan not mentioned
PHELPAY	Extent parents will help repay student's loans
PLUSLOAN	Take out a PLUS loan
PNOAPP1	Reason did not apply for aid (P)-first response
PNOAPP2	Didn't apply for aid (S)-second response
PNOAPP3	Didn't apply for aid (S)-third response
REALESTA	Take out second mortgage or refinanc real estate
RETFUNDS	Use funds previously set aside for retirement
RETRLOAN	Take out a loan against a retirement fund
SCHLLOAN	Take out a school-sponsored parent loan
SHELPAY	Extent student repays parents loans for educ
SIGNLOAN	Obtained a signature loan
SMAELOAN	Take out a Family Educ Loan from Sallie Mae
STATLOAN	Obtained a state-sponsored parent loan
UNDRLOAN	Loan from non-profit underwriter, incl TERI
PA_TIME	Total elapsed time to complete parent interview

Appendix E

Baccalaureate & Beyond: 93/03 Data Elements

Table C-1 Final set of data elements used in B&B:93/03 questionnaire

Element number		Data Element
I.		**BACKGROUND**
I.A.		**DEMOGRAPHICS**
I.A.1.		(Only if previously non-citizen) Current citizenship status
I.A.2.		Disability status
I.A.2.1.		Mobility disability
I.A.2.2.		Sensory disability
I.A.2.3.		Other disability
II.		**EDUCATION**
II.A.	P	**EDUCATION:** GRADUATE PROGRAMS (INFORMATION WILL BE COLLECTED FOR EACH PROGRAM ENROLLED IN. INFORMATION FOR THOSE WITH PRIOR GRADUATE EDUCATION EXPERIENCE WILL BE PRELOADED.)
II.A.1.		Type of degree program
II.A.2.	*	Name, city, state of institution enrolled in
II.A.3.		Type of institution
II.A.4.		Reason(s) for selecting institution
II.A.5.		Reason(s) for selecting program
II.A.6.		When began program, when stopped program
II.A.7.		Whether enrollment was continuous
II.A.8.		Intensity of attendance
II.A.9.		Usual time of attendance
II.A.10.		Whether program completed and degree conferred
II.A.10.1.		(If not completed but not currently enrolled) Reason(s) for leaving
II.A.10.2.		Whether completion planned
II.A.10.3.		If planned, when completion planned
II.A.11.	*	(If degree program is MA, MS, or PHD) Major field of study
II.A.12.		Receipt of aid and other sources of support: which types
II.A.13.		Satisfaction with various aspects of program
II.A.14.		(If never enrolled in graduate program) Whether ever took any graduate admissions exams
II.A.15.		(If never enrolled in graduate program) Whether ever applied
II.A.16.		Which state/professional licensing exams taken/passed
II.B.		**OTHER POST-BACCALAUREATE EDUCATION**
II.B.1.		Since 1997, number of undergraduate degree programs enrolled in and completed, number of licenses attempted and completed, and number of certifications attempted and completed, (For most recent occurrence of each since 1997, ask items II.B.1.1. through II.B.1.14.)
II.B.1.1.		What type of diploma or degree program
II.B.1.2.		Whether for work-related reasons, for personal interest, or both
II.B.1.3.		Whether to get or keep a state, industry, or company certificate or license
II.B.1.4.		(If yes), whether a test or examination is/was also needed for the certificate or license
II.B.1.5.		Month and year of first enrollment in the program
II.B.1.6.		Month and year of last enrollment in the program
II.B.1.7.		Enrollment intensity (full-time, part-time, or mixed)

See notes at end of table.

Table C-1 Final set of data elements used in B&B:93/03 questionnaire—Continued

Element number	Data Element
II.B.1.8.	Enrollment continuity (continuous or not)
II.B.1.9.	Whether completed diploma or degree program
II.B.1.10.	Type of school, business, or organization that taught the program
II.B.1.11.	Whether required by employer
II.B.1.12.	Whether employer paid for any part of tuition, fees, books or other materials
II.B.1.13.	Whether respondent paid for any part of tuition, fees, books or other materials
II.B.1.14.	Whether employer supported with time off with pay
II.B.2.	Whether enrolled in any other formal courses in the past 12 months for work-related reasons
II.B.2.1.	Type(s) of school, organization, or business that taught (any of) the course(s)
II.B.2.2.	Whether college credit earned for (any of) the course(s)
II.B.2.3.	Whether Continuing Education Units (CEUs) earned for (any of) the course(s)
II.B.2.4.	Whether employer paid for any part of tuition, fees, books or other materials for (any of) the course(s)
II.B.2.5.	Whether employer supported with time off with pay for (any of) the course(s)
II.B.2.6.	Specific reason(s) for taking
II.B.3.	Whether enrolled in any other formal courses in the past 12 months for personal interest
II.B.3.1.	Type(s) of school, organization, or business that taught (any of) the course(s)
II.B.3.2.	Whether college credit earned for (any of) the course(s)
II.B.3.3.	Whether Continuing Education Units (CEUs) earned for (any of) the course(s)
II.C.	**EDUCATION: EXPECTATIONS AND ATTITUDES**
II.C.1.	Highest level degree ever expect to attain
II.C.2.	What aspect(s) of undergraduate education stand out as influential or important (instruction received, major, extracurricular activities, etc.)
II.C.3.	How would respondent evaluate undergraduate education with respect to relationship to work, preparation for life, price, social contacts, health, financial security, overall happiness
III.	**EMPLOYMENT**
III.A.	**EMPLOYMENT: JOB SEEKING ACTIVITIES**
III.A.1.	(questions III.A.1.-III.A.1.2. to be asked only if completed graduate degree since last interview, for most recent degree completed) Whether respondent looked for new job after completing most recent degree
III.A.1.1.	Whether looked for job related to degree just earned
III.A.1.2.	Outcome of search (job in selected field)
III.A.2.	Whether currently looking for a job
III.A.2.1.	If yes, reason(s) for seeking job
III.B. [P]	**EMPLOYMENT: LABOR MARKET STATUS HISTORY**
III.B.1.	Time spent not working
III.B.1.1.	Since 1997, number of times unemployed; whether ever collected unemployment compensation; length of most recent unemployment spell.
III.B.1.2.	Since 1997, number of times out of the labor force; length of most recent OLF spell; reason for most recent OLF spell.
III.B.2.	Since 1997, whether ever employed less than full time
III.B.2.1.	If yes, reason(s) why
III.B.2.2.	How long

See notes at end of table.

Table C-1 Final set of data elements used in B&B:93/03 questionnaire—Continued

Element number	Data Element
III.B.3.	(If any children) Whether took any paid or unpaid leave from employer for birth/adoption/child care/medical care
III.B.3.1.	If yes, how long total
III.B.4.	(If any children) Whether ever worked reduced hours for/after birth/adoption/child care/medical care
III.B.4.1.	If so, for how long worked reduced hours
III.B.5.	How many different employers had since 1997
III.B.6.	How many different jobs held since 1997
III.B.7.	Status as of April 2003
III.B.7.1.	If employed, how many jobs
III.B.7.2.	If unemployed, whether received unemployment compensation
III.C.	**EMPLOYMENT: JOB-RELATED INFORMATION FOR FEBRUARY 2003 AND CURRENT OR MOST RECENT JOB (If more than one job, information for primary employer)**
	All information for current or most recent job; selected information for February job.
III.C.1.	Employment information
III.C.1.1.	ZIP code of place of employment
III.C.1.1.a. *	Industry
III.C.1.1.b. *	Occupation/job title
III.C.1.1.c. *	Job duties/responsibilities
III.C.1.1.d.	Employer type
III.C.1.1.e.	How long been in this job (with these duties)
III.C.1.1.f	How long been at this employer
III.C.1.2.	Average number of hours worked per week
III.C.1.3.	Hourly/weekly/monthly/annual wages/salary
III.C.1.5.	Whether telecommuting is available for respondent's job
III.C.1.6.	Whether flexible scheduling is available for respondent's job
III.C.1.7.	Type of place (at an office, telecommuting from home or other location, in the field or at a job site, etc.) where most work hours spent each week
III.C.1.8.	Job satisfaction with various aspects of the job
III.C.1.9.	Existence of various benefits
III.C.2.	Information about those not currently employed
III.C.2.1.	When employment ended
III.C.2.2. *	Reason(s) for not working
III.C.3.	(Only if employed part time) Reason for part-time employment
III.C.4.	(Only if currently enrolled) Relationship between job and school
III.C.4.1.	Whether job associated with educational program
III.C.4.2.	Primary status (student/employee)
III.D.	**EMPLOYMENT, CAREER**
III.D.1.	Whether consider current job part of a career that you're pursuing
III.D.2.	If yes, how long consider to have been in that career
III.D.3.	Whether consider self to have had more than one career since bachelor's completion

See notes at end of table.

Table C-1 Final set of data elements used in B&B:93/03 questionnaire—Continued

Element number		Data Element
III.D.4.		If yes, reason(s) for changing
III.D.5.		Whether respondent expects to be doing same type of work in 3 years
IV.		**TEACHERS**
IV.A.	P	**TEACHERS: FILTER TO DETERMINE WHETHER R SHOULD COMPLETE THIS SECTION**
		(THOSE IDENTIFIED AS HAVING TAUGHT IN B&B:93/94 OR B&B:93/97, OR WHOSE TRANSCRIPTS INDICATED TEACHER TRAINING, WILL BE SKIPPED TO IV.B.)
IV.A.1.		Whether worked as teacher
IV.A.2.		Whether trained as teacher
IV.A.3.		Whether considering teaching
		(IF NO TO ALL, SKIP TO SECTION V)
IV.B.	P	**TEACHERS: CERTIFICATION-LICENSURE STATUS**
IV.B.1.		(Only of those we know weren't certified at the probationary level or higher as of last interview) Ever certified or licensed to teach in at least one state
IV.B.1.1.		Highest level at which R has ever been certified
IV.B.1.2.		(Ask only if a) R ever held certificate at probationary level or higher and b) R was not certified as of last interview or date of R's first certification is missing from previous interviews) When first became certified to teach at probationary level or higher
IV.B.1.3.	*	Field(s) in which certified at probationary level or higher
IV.B.2.		Currently certified or licensed to teach in at least one state?
		(IF NOT CERTIFIED OR LICENSED TO TEACH, SKIP TO IV.B.3)
IV.B.2.1.		Kind(s) of certificate or license currently held
IV.B.2.2.		Field(s) in which currently certified at probationary level or higher
IV.B.2.3.		Certification or license issued by which state(s)
IV.B.3.		(If first taught, trained, certified, or identified as having considered teaching since B&B:93/97 or if never taught as of B&B:93/97) Entry into teaching
IV.B.3.1.		Whether applied for a teaching job
IV.B.3.2.	*	If never applied, reason(s) why not
IV.B.3.3.		Whether received offers for teaching positions
IV.B.3.4.	*	If offered position but did not accept, reason(s) why not
IV.B.4.		(If newly certified) Dates employed as a school teacher at any level full- or part-time prior to completing certification requirements (including substitute teaching, not including student teaching)
IV.C.	P	**TEACHERS: TEACHING EXPERIENCE SINCE LAST INTERVIEW**
		(ASK IV.C.1-IV.C.2 FOR EACH TEACHING JOB HELD SINCE LAST INTERVIEW)
IV.C.1.		Number of schools at which taught since last interview
IV.C.1.1.	*	Name of school, city, state, zip code
IV.C.1.2.		Type of school in which employed
IV.C.1.3.	*	Start/end date for each teaching job
IV.C.1.4.		Whether worked for two or more districts since began teaching
IV.C.1.5.		(If first teaching job occurred since last interview) Participation in teacher induction program during first job

See notes at end of table.

Table C-1 Final set of data elements used in B&B:93/03 questionnaire—Continued

Element number		Data Element
IV.C.1.6.		(If first teaching job occurred since last interview) Level of agreement/ disagreement with statements describing the first school's effectiveness in assisting new teachers in various aspects of work
		(ASK IV.C.2. - IV.C.11. FOR CURRENT OR MOST RECENT TEACHING JOB and FIRST TEACHING JOB (IF OCCURRED SINCE LAST INTERVIEW)
IV.C.2.	*	Main field in which taught (code as IV.B.1.3)
IV.C.3.	*	Other field(s) in which taught (code as IV.B.1.3)
IV.C.4.	*	Grade(s) taught most (code as IV.B.1.3)
IV.C.5.	*	Grades/field teaching but not adequately prepared (code as IV.B.1.3)
IV.C.6.		Teaching full- or part-time
IV.C.7.		Contract arrangement/type of teacher
IV.C.8.		Number of months under teaching contract
IV.C.9.		Academic year base salary
IV.C.10.		Other income from teaching in this district
IV.C.11.		Other income
IV.D.		**PERCEPTIONS AND ATTITUDES TOWARD TEACHING**
IV.D.1.		Willingness to become a teacher again
IV.D.2.		Plans to continue/return to teaching next year
IV.D.3.		How long plan to be in teaching
IV.D.4.		Any plans to move into non-teaching job (administration, counseling, etc.) in education
		(IF CURRENTLY TEACHING OR INTEND TO CONTINUE, SKIP TO SECTION V)
IV.D.5.	*	If left/planning to leave teaching since last interview, reason(s) why
IV.D.6.		Factors that make you want to stay in teaching
IV.D.7.		Factors that make you want to leave teaching
V .		**FINANCES and DEBT**
V.A.		**INCOME (For calendar year 2002)**
V.A.1.		Annual personal income earned through employment
V.A.2.		Annual income earned by spouse/partner through employment
V.A.3.		Other non-wage income of respondent or spouse/partner
V.A.4.		Participation in various types of regular savings activities in the last year
V.A.4.1.		If saving for child's education, what vehicles used
V.B.	P	**DEBT AND OWNERSHIP**
V.B.1.		Student debt
V.B.1.1.		(Only if missing) Total amount borrowed for undergraduate education
V.B.1.2.		Amount borrowed for graduate (post baccalaureate) education from all sources
V.B.1.3.		Amount still owed
V.B.1.4.		Whether in any loan forgiveness program
V.B.1.5.		If completely repaid, when finished
V.B.1.6.		If in repayment on any loans
V.B.1.6.a.		When payments started
V.B.1.6.b.		Type of repayment plan
V.B.1.6.c.		Whether claiming student loan interest deduction
V.B.1.7.		Total of all monthly education loan payments

See notes at end of table.

Vita

Kelly Landry Alig was born in Thibodaux, Louisiana. She obtained her Bachelor of Science degree in occupational therapy from Louisiana State University Medical Center – New Orleans in 1993. She completed her Master of Arts in occupational therapy at Texas Woman's University in Denton, Texas in 2001. She joined the University of New Orleans graduate school to pursue a Ph.D. in educational administration with a higher education concentration in 2004. Alig worked as an occupational therapist in the clinical setting until 2001. She joined the Department of Occupational Therapy faculty at LSUHSC – NO as assistant professor in 2001.

She is married to Mr. Andrew Alig, and they reside in New Orleans with their two children, Parker and Avery. The degree of Doctor of Philosophy will be conferred upon her in May of 2014.