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**A Social Portrait of Legacies at an Elite University**

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August 1, 2008

Word Count: 8784 (excluding tables/figures)

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### **Abstract**

College and university admission preferences for legacy applicants have been the source of much debate. We seek to build upon the existing literature by providing a detailed empirical portrait of legacies at a private, selective university. In this study, we examine how legacies are distinctive in their admissions profiles, within-college achievement, and post-graduation plans, using data from a panel study of two recent cohorts of students attending Duke University. We find that legacies enter college from households with an abundance of economic, cultural and social capital, but also have lower levels of human capital compared to other students with college graduate parents. Due to this human capital deficit, legacies have lower grades in the first college year, but show little academic underperformance in subsequent semesters. Compared to their pre-college profiles there are few differences in post-graduation plans, although legacies are less likely to plan on being a medical doctor or engineer and have somewhat lower degree aspirations than other students.

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Admissions preference for legacies – students with parents or close relatives that have alumni ties to the college or university – has featured prominently in recent legal and policy debates (Golden, 2006). However, more controversy has surrounded affirmative action programs that favor underrepresented minority students, notably the June 2003 Supreme Court rulings involving the University of Michigan (*Gratz v. Bollinger*; *Grutter v. Bollinger*). A recent survey finds that three-quarters of Americans disagree that legacies should be given special consideration in the admissions process (Selingo, 2004). As a comparison, less than half of these survey respondents disagree with admissions preferences for minority candidates.

Most research regarding legacies has focused on admissions (e.g., Bowen, Kurzweil & Tobin, 2005; Epenshade & Chung, 2005; Epenshade, Chung & Walling, 2004; Howell & Turner, 2004; Karabel, 2005; Karen 1991). The legacy tradition is most extensive at elite colleges and universities, and has been a fixture at schools like Harvard, Princeton and Yale since their inception. However, preference for legacy applicants first became a contentious issue as new groups sought access to higher education: Jewish and public school graduates after the 1920s, followed by a lessening of racial/ethnic, gender and geographic barriers to postsecondary education after World War II. As the number of qualified applicants increased, so did the level of competition for admission to these elite universities, encroaching upon legacies' traditional advantage (Howell & Turner, 2004, pp. 327-330; Karabel, 2005). Acceptance rates during this period suggest rather accommodating admission standards for legacy applicants: by 1951, 73 percent of legacies were admitted at Yale, 79 percent at Princeton, and 94 percent at Harvard (Karabel, 2005, p. 602, fn. 126).

Today, the campuses of these elite schools today reflect much greater racial/ethnic, religious, and – to a lesser extent – socioeconomic diversity than during this period of exclusion

and unabashed favoritism of alumni children. Still, legacies continue to enjoy an admissions advantage at selective colleges and universities. For example, Karen (1991, pp. 359-362) finds that nearly 40 percent of legacies were admitted into the Harvard College class of 1984, compared to about 14 percent non-legacies. Net of controls for race/ethnicity, sex, test scores and socioeconomic background, legacies are nearly 20 percent more likely to be admitted to selective colleges and universities than other students (Bowen, et al., 2005, pp. 101-108; Epenshade, et al., 2004, p. 1443). Admissions committees can look favorably upon a legacy's application for a number of reasons. Colleges and universities have an interest in maintaining a sense of tradition, and legacies can help serve this goal (Bowen & Bok, 1998, p. 24; Bowen et al., 2005, pp. 167-171). Taking from the experiences of their alumni parents and relatives, legacies are likely to arrive on campus with greater appreciation for these traditions and institutional loyalty. Further, the high rate of monetary support by legacies and their parents is viewed as crucial to elite schools' financial success (Karen, 1991, pp. 366-7; Liptak, 2008).

Using data from the *Campus Life and Learning* (CLL) project, a panel study of two recent cohorts attending Duke University, this study adds to the existing literature by providing a detailed empirical portrait of legacies throughout the college career. Few studies have explored legacies' within-college experiences and achievement (e.g., Massey & Mooney, 2007; Spenner, Buchmann, & Landerman, 2005). Duke is an appropriate setting to study the experiences of legacy students at elite institutions for several reasons. First, Duke is highly comparable to other selective colleges and universities in terms of student background and the legacy share of the student body. Also, Duke has a documented history of admissions preferences for wealthy students, notably "development cases" – students with parents or family members likely to make large future donations (Bowen, et al., 2005, pp. 169-71). As Duke rose in national prominence in

recent decades, so did its endowment, as successive presidents targeted children of wealthy families for admission (Golden, 2006, pp. 49-82). Finally, with four waves of data collection and merges of institutional files, including admissions records and transcripts, the CLL provides a level of detail typically unavailable in other studies of postsecondary students.

### **Legacies and Forms of Capital**

Families use a myriad of ways to transmit social advantage to the next generation, including biological processes, socialization, and the direct transmission of resources (Erikson & Goldthorpe, 2002; Featherman & Hauser, 1978). Processes that support academic achievement, such as cognitive development, habits and values, and financial investments in schooling are central in intergenerational transmission (Bourdieu & Passeron, 1970/1990). In this study, we use a conceptualization of forms of capital to understand the experience of legacies at an elite university. More specifically, we examine how legacy status is associated with types of economic, social, cultural and human capital upon matriculation, and how these resources influence academic achievement, college activities and post-graduation plans.

Bourdieu (1983/1986) defines capital as including all forms of power, taking the primary forms of economic, social and cultural capital. In certain instances, social and cultural capital can be converted into economic capital (money, property rights, etc.). Social capital refers to the resources available within an individual's social networks (including group memberships and titles). Cultural capital can take the form of dispositions (including tastes and linguistic styles), objective cultural goods (art collections, books, etc.), and educational credentials. In this manner, an admissions preference for legacies at selective colleges and universities is indicative

of social capital being converted into a material advantage – admission into an elite educational institution – and later, cultural capital in the form of an elite academic credential.

Students and their families work to maintain or enhance their social position by converting these resources into other forms of capital and tangible advantages. An individual's location within social structure is linked to the maintenance and acquisition of capital (Lin, 2001, pp. 33-40). In short, a student from a privileged background enters college not only with an abundance of economic capital, but often a wealth of social and cultural capital as well. While the upper class is similar in respect to volume of capitals possessed, within this broad category are groups distinguished by the relative distribution of economic and cultural capital (Martin, forthcoming; Weininger, 2005). For example, Bourdieu (1973) argues that business executives have an abundance of economic capital but relatively less cultural capital than professionals, who tend to place more emphasis on educational investment for their children.

The notion of cultural capital is among Bourdieu's most popular contributions to American sociology (Sallaz & Zavisca, 2007) and has been widely used in studies of secondary school students (for review, see Lareau & Weininger, 2003). Fewer studies have examined cultural or social capital at the postsecondary level (e.g., Persell, Catsambis, & Cookson, 1992; Zweigenhaft, 1993). During the college application process, students and their families draw on their social and cultural capital in making decisions about which schools to attend, and whether to apply to an elite college or university (McDonough, 1997; Reay, David, & Ball, 2005). Students from privileged backgrounds typically enter college from households where attainment of a college degree is not only encouraged, but expected (Walpole, 2003). Once on campus, these students can draw on this encouragement and successful educational experiences of parents and family members (McClelland, 1990).

Human capital refers to the knowledge, skills, health, and values that people possess (Becker, 1975).<sup>1</sup> Dimensions of human capital that are germane to academic performance include: (1) academic and intellectual skills; (2) self-esteem, academic self-confidence, and identity; and (3) academic effort (Spenner, Mustillo, & Martin, 2008). Academic skills include competencies with understanding or applying theories, and written or oral expression. Self-esteem, or an individual's assessment of their own worth, has also been linked to academic performance of postsecondary students (e.g., Massey, et al., 2003; Morgan & Mehta, 2004). Rosenberg and colleagues (1995) suggest that specific self-esteem – such as academic self-confidence – is more closely related to behavior outcomes and academic achievement than global self-esteem. Also, closer identification with a good student identity could yield stronger academic performance and greater investments of time and energy (Burke, 2004; Reitzes & Burke, 1980). Finally, a number of studies use hours spent studying as an indicator of academic effort, and generally find small-to-modest positive effects on academic performance (e.g., Rau & Durand, 2000; Schuman, et al., 1985).

### **Research Questions**

In this study, we compare legacies with three groups of students with non-alumni parents, distinguished by parents' postsecondary degree: students with at least one parent with a *professional degree* (e.g., MD, JD, PhD), students with at least one parent with a (non-professional) *college degree*, and students without a college graduate parent (*no degree*). Building upon the existing literature and previous studies of legacies at selective colleges and universities, this study addresses three primary research questions:

1. *How are legacies distinct from other admissions groups in their admissions profiles?*

In some respects, we expect legacies to portray the history of elite colleges and universities and resemble the student bodies from earlier decades and generations. In this way, legacies are more likely to be white, Protestant and US citizens and from affluent households, and more likely to have attended private high schools. Also, compared to students with no degree parents, legacies and other students with college graduate parents likely arrive on campus with more economic, cultural and social capital. Legacies, exhibiting social capital through an institutionalized tie to campus, are likely similar to other students with college graduate parents in terms of economic capital. The households of students with college graduate – and especially professional degree – parents include the cultural capital associated with the respective postsecondary degrees.

Several recent studies show admissions preferences for legacies in terms of standardized test scores (e.g., Bowen et al., 2005; Epenshade et al., 2004; Howell & Turner, 2004). We expect that that legacies will not only exhibit lower test scores than other students with college graduate parents, but also relative deficits along other dimensions of human capital, including academic skills, self-concept, identity and effort.

2. *How do legacies compare with other student groups in terms of academic achievement and experiences across the college years?*

The few studies that have examined legacies' academic achievement suggest a degree of underperformance early in college (Massey & Mooney, 2007; Spenner et al., 2005) but little underperformance by the end of college (Bowen et al., 2005. p. 171). In explaining this early underperformance, we explore the forms of capital with which students enter college. In particular, we focus on the accumulation of human capital across the college years.

3. *How are legacies different from other groups in their post-graduation educational and occupational plans?*

Students' plans for after graduation, taken at the end of the fourth college year, offer a final view of how legacies may differ from other students. Selective colleges and universities serve as important links from the educational system to elite occupations (Katchadourian & Boli, 1994). Net of individual student characteristics and other institutional factors, attending a selective college or university has a positive impact on future earnings (Kingston & Smart, 1990), as well as modest positive effects on occupational status (Pascarella & Terenzini, 2005, pp. 467-476). By examining the experiences of legacies attending an elite university, this study illustrates a pathway towards often high status, high paying occupations for an elite status group.

## **Data and Methods**

### *Research Design*

The *Campus Life and Learning* (CLL) project involves a multi-year, prospective panel study of two consecutive cohorts of students admitted to Duke University and who accepted admission (incoming classes of 2001 and 2002). Duke is a private research university located in Durham, North Carolina with a total undergraduate enrollment of about 6,000 students. The design randomly selected about one-third of white students, about two-thirds of Asian students, all black and Latino students, and about one-third of bi- and multi-racial students, based upon self-reported racial ethnic status as found on the admission application form.

While this study was not designed to be representative of all postsecondary students, the CLL is comparable to other studies of selective colleges and universities (e.g., Massey et al., 2003). Duke University was included as one of the eight most selective institutions, defined as having a combined average SAT score (mathematics and verbal) of 1300 or higher, in the *College and Beyond* (Bowen & Bok, 1998, p. 337). Comparisons with the national *Cooperative*

*Institutional Research Program* suggest that the CLL is similar to other private, selective colleges and universities (Martin, forthcoming; Sax et al., 2001, pp. 73-112). In contrast to studies that examine samples from multiple institutions, this study is designed to capture the rich details of students' experiences at a single institution with multiple data points and merges of various types of institutional data, often unavailable in other studies.

The final sample for both cohorts included 1536 members (602 whites, 290 Asians, 340 blacks, 237 Latinos, and 67 bi- or multi-racial). Respondents were surveyed in the summer preceding college matriculation. Refusals were low at 1.8 percent. About 77 percent of sample members completed the mail questionnaire, and over 96 percent of these respondents provided signed release to their institutional records. Our analytic sample for this paper includes students who responded to the first survey wave and were not missing on key demographic variables (n = 1178). Of those that completed the pre-college survey, 77 percent also responded to the first year survey, 75 percent to the second year survey and 67 percent to the fourth year survey.<sup>2</sup> Appendix A provides comparisons of possible non-response and drop-out bias, and we conclude that the effects are quite small (cf. Spenner et al., 2005). All models and estimates use probability weights to reflect the sampling of racial ethnic groups.

### *Measures*

Appendix B provides measurement notes for variables and alpha coefficients for scales. Students were assigned to one of four groups based on their response to the pre-college survey. *Legacies* (20.4% of students) have a parent or family member who graduated from Duke University. As a comparison, Golden (2006, pp. 117-144) finds that over one-fifth of Notre Dame freshman are alumni children, as well as 10-15 percent of students at Ivy League and other

elite schools. Students with non-alumni parents were classified by the level of educational attainment of the student's more educated parent (if available for both parents): *professional degree* students (31.5%) have at least one parent with a professional (e.g., JD, MD, PhD) degree, *college degree* students (40.6%) have at least one parent with a (non-professional) college degree, and *no degree* (7.6%) parents have less than a bachelor's degree.

Information for students' *race/ethnicity*, *citizenship* and *high school type* was collected from the pre-college survey and, if missing, from institutional records.<sup>3</sup> Other socioeconomic characteristics collected in the pre-college survey include: *religious affiliation*, *intact family*, *household income*, *parents' occupation* and *financial support* for college expenses. Also, respondents were asked about their and their parents' involvement in *cultural activities*, such as visiting art galleries, museums, the opera, ballet, music concerts, movie theaters, science centers and zoos. Composite scales were created for students' cultural participation during middle school and high school, and parents' activities during their students' middle school years. Measures of cultural resources present in the home during the high school years include *number of books* and a scale of *educational resources*, such as a personal computer, access to the internet or a quiet place to study.

Measures of pre-college academic achievement include *SAT score* (mathematics and verbal tests), taken from institutional files, and *advanced placement credit*, collected in the pre-college survey. The pre-college and within-college surveys provide measures of human capital across the college career. *Academic skills* are measured with an 8-item scale of self-assessed abilities in areas such as remembering factual knowledge and applying concepts or theories. *Self-esteem (global)* is measured with three items from the Rosenberg self-esteem scale (Rosenberg et al., 1995). In each survey, students were asked to reflect upon the most

challenging course they took in the previous semester. *Academic self-confidence* is how confident the student was of succeeding in the course (1 = not at all confident, 5 = extremely confident), and *self-assessed ability* refers to students' judgments about their ability compared with other students in the course (1 = very much below average, 5 = very much above average). Other items ask students to rank the importance (1 = not at all important, 5 = extremely important) of having a *good student identity* and of *proving-self academically*. Finally, as a measure of academic effort, each survey collects information about students' time use in a typical (non-exam) week, including *hours spent studying*.

Academic outcomes collected from institutional records and official transcripts include semester *grade point averages*, *final/declared major field area*, and *graduation with honors*. The fourth year survey includes detailed questions regarding students' *future plans*, both in the fall immediately following graduation and about five years after leaving Duke, such as *expected income* and *degree and occupational aspirations*. Also, students were asked about the *use of family contacts* in their post-graduation preparation.

## **Results**

### *Pre-College Student Profiles*

To what extent are legacy students advantaged in their pre-college student profiles and form a distinct subgroup on campus? Table 1 describes socioeconomic characteristics for the four student groups: legacies and students with non-alumni parents with a professional degree, other college degree or no college degree. Compared to other students, legacies are more likely to be white, US citizens and Protestant, and are more likely to have attended private high schools.<sup>4</sup> Additionally, legacies come from households that are considerably more affluent than

students with no degree parents, and slightly more advantaged than students with college degree parents. The annual pre-college household income of legacies (about \$240,000/year) is nearly triple that of students with no degree parents and is about 44 percent higher than students with college degree parents. Related to the higher levels of household education and income, over three-quarters of legacies have at least one parent with a high-status professional occupation, compared to about 62 percent of students with other degree parents and less than one-third of students with no degree parents.

[TABLE ONE ABOUT HERE]

Although students with professional degree parents are more likely to be black, Latino or Asian than legacy students, they are quite similar to legacies on other background measures. For example, legacies and students with professional degree parents expect family members to cover nearly three-quarters of their college expenses, while students with no degree parents expect to rely on grants, loans and scholarships for over two-thirds and family members for about one-quarter of expenses. Like legacies, students with professional degree parents are more likely to come from high income, two-parent households, and are more likely to have attended private high schools than other students.

Legacies and students with professional degree parents also come from families that possess high levels of cultural capital. During the middle school and high school years, these students and their parents participate more frequently in cultural activities than other students. In analysis not shown, we examine differences for each activity individually. Legacies and students with professional degree parents participate more often in “highbrow” (e.g., visiting art galleries and museums, attending the opera, ballet or symphony) and “popular” activities (e.g., going to the movie theater and music concerts, and attending sports events) than other students.

While Bourdieu (1973) emphasized that high status groups have exclusive tastes and a greater familiarity with “highbrow” cultural practices, contemporary high status Americans are active consumers of both “highbrow” and “popular” cultural forms (Alderson et al., 2007; Lamont, 1992; Peterson & Kern, 1996). Not only do legacies and students with professional degree parents enter college with more experience with cultural activities, their homes also contained more books and other educational resources. About four-fifths of legacies had more than 200 books present in the home during high school, compared to about two-thirds of students with college degree parents and one-third of students with no degree parents.

Legacies and students with professional degree parents come from similarly advantaged backgrounds, characterized by an abundance of financial and cultural resources. However, relative to other students with college graduate parents, legacies have somewhat lower levels of pre-college achievement and human capital (Table 2). The average SAT score for legacies is about 40 points lower than students with professional degree parents, and about 12 points lower than students with other degree parents. About 44 percent of legacies have SAT scores below their class average, compared to about 32 percent of students with professional degree parents.<sup>5</sup> Although this test-score gap between legacies and other students with college graduate parents is significant, it is small in comparison to other groups that are shown admissions preferences. Epenshade, Chung and Walling (2004) estimate the admissions preference shown to different student groups at elite universities in terms of SAT points on a 1600-point scale. Net of other factors, black applicants receive a 230 point advantage, Latino applicants get 185 points, recruited athletes get 200 points, and legacy applicants receive the equivalent of a 160 point boost (Epenshade et al., 2004, p.1444). Among college matriculants in the CLL, about 89 percent of black students, about 69 percent of Latino students have test scores below their class

average.<sup>6</sup> Legacies, like other students with college graduate parents, are more likely to report receiving AP credit than students with no degree parents.

[TABLE TWO ABOUT HERE]

Legacies enter college with somewhat lower levels of human capital, especially in comparison to other students with college graduate parents. Legacies report the lowest levels of pre-college academic skills and ability, and consider a good student identity to be least important. Legacies report lower levels of academic self-confidence than students with professional degree parents. Related to these self-reported skill gaps, legacies also expect to have a first year GPA that is about one-tenth of a letter grade lower than other students with college degree parents.

Table 3 presents results from logistic regression predicting the likelihood of legacy status with socioeconomic characteristics and high school achievement. The results confirm that legacy students form a distinct high-status group on campus who are predominately white, Protestant and come from rather affluent households yet have somewhat lower levels of pre-college achievement. In this manner, legacies largely represent constituencies who controlled elite colleges and universities before the expansion of American higher education and concurrent rise of meritocracy in the early- and mid-twentieth century (Jencks & Riesman, 1962/2002; Karabel, 2005). For example, being black (versus white) is associated with an 80 percent decrease in the odds of being a legacy student, and being Catholic or Jewish (versus Protestant) is associated with about a 72 percent decrease in the odds. A one standard-deviation increase in SAT scores is associated with more than a 55 percent decrease in the odds of being a legacy. While the effects of family income, cultural activities and educational resources on legacy status are positive, they are not significant net of other factors.

[TABLE THREE ABOUT HERE]

Thus, legacies arrive on campus forming a distinct status group that is characterized by an abundance of economic, cultural and social capital. In this way legacies resemble the profile of students with professional degree parents, although legacies are more likely to be white or Protestant. However, relative to other students with college graduate parents, legacies enter college with lower levels of human capital, as shown by lower standardized test scores, lower levels of self-assessed academic skills and abilities and less attachment to the good student identity or proving oneself academically.

#### *Academic Achievement and College Activities*

How do legacies compare with other students in terms of academic achievement across the college career? Figure 1 displays semester grade point averages across the four college years, by legacy status and parents education. In the first semester, legacies score over two-tenths of a letter grade lower than students with professional degree parents and about one-tenth lower than other students with college degree parents. After the first college year, legacies largely close this gap with students with professional degree parents and beyond the first year achieve higher grades in each semester than students with other degree parents.

[FIGURE ONE ABOUT HERE]

What explains legacies' early academic underperformance and then rather substantial gains in semester grades across the first two college years? Table 4 presents results from OLS regression predicting the effects of student background and college activities on first year cumulative GPA. After two semesters of study, students with professional degree parents score about one-tenth of a letter grade higher than students with college degree parents, about one-

eighth of a letter grade higher than legacies, and about one-quarter higher than students with no degree parents (Model 1). Model 2 adds measures of student background, high school achievement and major field area. Replicating well-known national differences at selective colleges and universities (Bowen & Bok, 1999; Massey et al., 2003), black students score about .28 of a letter grade lower than white students. Net of other characteristics, female students have first year grades that are nearly .09 of a letter grade higher than males. A one-standard deviation increase in SAT score is associated with about .17 of a letter grade increase, and having received AP credit is associated with about .09 of a letter grade increase. Also, relative to natural science and engineering majors, social science majors score about one-ninth of a letter grade higher and humanities majors score about one-seventh of a letter grade higher. With the addition of these socioeconomic and high school achievement variables, the effects of being a student with other college degree and no degree parents become insignificant. However, net of other student background characteristics, legacies still score nearly one-tenth of a letter grade lower than students with professional degree parents.

[TABLE FOUR ABOUT HERE]

Including measures of pre-college human capital reduces the effect of legacy status by about 23 percent and to insignificance (Model 3). While the achievement gap for students with other college degree or no degree parents is attributable to differences in socioeconomic background and high school achievement, legacy students appear disadvantaged by their pre-college human capital deficit. A one-unit increase in self-assessed ability in challenging high school courses is associated with about .07 of a letter grade increase. Hours spent studying has a positive effect on first year grades, although small relative to other measures. Self-esteem ( $t = 1.87$ ) and the importance of a good student identity ( $t = 1.86$ ) also have small, positive effects on

first year grades but fail to reach significance thresholds. Overall, few students in the CLL exhibit severe academic underperformance – less than two percent of students have cumulative GPAs below 2.0 (“C” average) after the first year – or low absolute levels of human capital. Still, relative to other students with college graduate parents, legacies achieve lower grades early in the college career and this is explained by legacies’ lower levels of pre-college human capital.

[TABLE FIVE ABOUT HERE]

Just as students show higher levels of achievement as they move across the college years, there is a steady accumulation of human capital from the first to the fourth year across all student groups (Table 5). As in pre-college, in the first year legacies attach less importance to proving themselves academically. In each college year, legacies consider a good student identity to be less important than other students with college graduate parents, although this identity becomes less important for other groups by the fourth year. After the fourth year, legacies not only have semester GPAs similar to other students with college graduate parents but also report similar levels on other dimensions of human capital. All student groups report similar levels of self-esteem and time spent studying in each college year.<sup>7</sup> Across the college years, legacies largely close the gap in reported academic skills, and between-group differences are not significant by the fourth year. For each college year, legacies report similar if not slightly higher levels of ability and self-confidence as students with other degree parents.

### *Post-Graduation Plans*

How are legacies distinct from other students at the end of the college career? Table 6 describes final academic outcomes and post-graduation plans. As discussed above, after the first year legacies and other students with college graduate parents are increasingly similar in terms of

achievement and college activities, and this pattern continues with immediate post-graduation plans. Compared to other students, legacies are less likely to major in the natural sciences or engineering and are more likely to major in humanities. Over one-third of students with professional degree parents graduated with honors, compared to about one-quarter of legacies and students with other college degree parents and about one-sixth of students with low education parents. Bowen, Kurzweil and Tobin (2005, p. 171) report little academic underperformance by legacies – roughly 1.4 percentage points in class rank –in the *College and Beyond* 1995 entering cohort. Our results generally confirm this finding. Legacies are less likely to graduate with honors and achieve somewhat lower grades in each semester than students with professional degree parents, the group that legacies most resemble in their socioeconomic profile. After the first college year, legacies show similar levels of academic achievement as other students with college degree parents.

[TABLE SIX ABOUT HERE]

Post-graduation plans were collected in the spring semester of the fourth college year and provide a final view of how legacies may differ from other student groups. Legacies are somewhat less likely to report plans for attending school full-time in the fall after graduation than other students, and more likely to report plans other than school or work. While there are few significant differences for immediate post-graduation plans, legacies are more to report the use of family or personal contacts for their post-graduation plans. About two-thirds of legacies report the use of personal contacts, compared to about 45 percent of students with professional degree parents and students with low education parents.

Plans for five years after graduation reveal stronger differences between legacies and other student groups. Legacies have lower degree expectations and are less likely to expect a

high-status professional occupation than both other students with college graduate parents and students with no degree parents. For example, about 44 percent of legacies plan on having obtained or be working towards a professional degree, compared to about 60 percent of students with professional degree and no degree parents and about 52 percent of students with other degree parents. Legacies are not significantly different from other students in plans for being a lawyer or executive/manager. Legacies are less than half as likely to plan on being a medical doctor compared to students with professional degree and no degree parents, and about one-fourth as likely to plan on being an engineer compared to students with other degree and no degree parents.

In sum, as a result of their relative human capital deficit at admissions, legacies have lower grades than other students with college graduate parents early in the college career. After the first year, legacies have similar levels of achievement and show comparable levels across several human capital measures. Compared to the socioeconomic and pre-college profiles, there are few differences in post-graduation plans, although legacies are less likely to plan on being a medical doctor or engineer and have lower degree aspirations than other students.

### **Discussion**

Soon after the Supreme Court's *Grutter* decision, an ultimately failed Senate bill included a reporting requirement to draw attention to admissions policies that favor students from wealthy families. As part of the Higher Education Act (S.1793, 108<sup>th</sup> Cong., §302), this proposal called for postsecondary institutions to report the number, racial ethnic group, sex and Federal Pell Grant eligibility of legacies and students who were admitted as part of an early decisions program. As a challenge to the idea of a meritocratic admissions process, this proposal was

designed to counter opponents of affirmative action programs that preference underrepresented minorities (Golden, 2006, pp. 227-258). In high profile moves, Harvard and Princeton recently dropped their early decisions programs, arguing that they put low-income and minority students at a disadvantage (Finder & Arenson, 2006, p. A1; Finder, 2006, p. A16). Admissions preference for legacies remains a contentious issue, with some commentators and politicians calling for preferences to be abolished (Bowen et al., 2005, pp. 167-171). At present there appears little impetus for private elite colleges and universities to abandon legacy preferences.

Our contribution to this broader discussion is to provide a detailed empirical portrait of legacies attending an elite institution. Comparable to figures available at other selective colleges and universities, about one-fifth of students in the CLL have a parent or close relative who also attended Duke, and over five-sixths of these legacies are white. While our data do not provide information on Pell Grant eligibility, legacies were least likely of the four groups to report an interest in receiving financial aid, and expect to rely on parents and family members for most college expenses. Less than five percent of legacies enter college from households with a reported annual income of \$35,000/year or less, compared to about 40 percent of students without college graduate parents.<sup>8</sup>

Our study primarily examined three areas: pre-college admissions profiles, within-college academic achievement and post-graduation academic and occupational plans. Legacies are most distinctive as a status group in their pre-college profiles, largely representing constituencies that monopolized higher education at the beginning of the twentieth-century: affluent white Protestants. However, upon matriculation legacies have a human capital deficit relative to other students with college graduate parents, evidenced by lower test scores and lower levels across six of seven human capital measures.

During the first college year, legacies achieve lower than expected grades, and this underperformance is attributable to legacies' pre-college human capital deficit. By the fourth college year, legacies achieve grades that are comparable to other students with college educated parents, and also show similar levels of human capital across most dimensions. Legacies consider a good student identity to be less important than other students, and are also less likely to major in the natural sciences or engineering. There is little difference between student groups in immediate post-graduation plans, although legacies are less likely to plan on becoming a medical doctor, engineer or scientist, and have lower final degree aspirations. Across the college career, legacies exhibit an activation of social capital: first, through college admission despite somewhat lower test scores, and finally in the prevalent use of personal contacts for post-graduation educational and occupational plans.

Legacies appear undeterred by their relative underperformance during the first year, and go on to achieve high grades in subsequent semesters. While our results show that legacies' human capital deficit at admissions explains this early underperformance, it is likely that legacies draw upon their other resources and forms of capital. During high school, legacies are surrounded by an abundance of cultural capital in the home, including educational resources and books, and images of academic success in the family (Bourdieu, 1973; McClelland, 1990). Legacies by definition have parents or family members with an educational credential from an elite university, and thus likely grew up in a household that cultivates the development of the tastes, styles of speech and expression, and interpersonal skills rewarded by educational institutions (Lareau, 2003). Further, legacies have the unique resource of being able to turn to family members who have direct experience – and established social networks – as alumni.

In other ways, legacies reveal a benefit afforded by an abundant supply of economic, cultural and social capital: flexibility to be uncertain about future plans. In their pre-college profiles and post-graduation plans, legacies are more likely than other students to be uncertain about their future educational and occupational plans. Pre-college, over 39 percent of legacies do not know their expected major field and 35 percent do not know their first occupation after graduation, compared to about 28 percent and 26 percent of other students, respectively. At the end of the fourth year, legacies are most likely to report plans other than school or work for the fall immediately following graduation, and are least likely to report future occupational plans.

What are the costs and benefits of admissions preferences for legacies at elite colleges and universities? The legacy advantage has declined slightly over the past two decades (Epenshade et al., 2005, pp. 1442), and the university campus today is undoubtedly far more diverse and inclusive than half a century ago. Although legacies are predominately white, Epenshade and Chung (2005, pp. 299-300) estimate that ending admissions preferences for legacies would only modestly increase the share of admitted students from minority groups. Howell and Turner (2004) determine that the costs to diversity will decline over the coming decades, due to changes in the racial ethnic composition of the alumni and legacy pools. Further, legacies can help colleges and universities meet financial objectives as well as maintain a sense of historical continuity on campus (Bowen et al., 2005).

Our data only allow comparisons among matriculants at an elite university, and we cannot make empirical judgments about the students who would have been accepted had there not been an admissions preference for legacies. Still, our results have several distinct implications. An admissions preference for legacies clearly “advantages the advantaged,” as legacies comprise an affluent high status group, characterized by an abundance of economic,

cultural and social capital, but a relative deficit of human capital. On the one hand, by the end of college legacies achieve high academic standards, comparable to other students with college graduate parents. On the other hand, of the four comparison groups legacies attach the least importance to being a good student across all college years, are least likely to major in the natural sciences and are least likely to plan on becoming a medical doctor, engineer or scientist.

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<sup>1</sup> Bourdieu was critical of the human capital perspective, arguing that it failed to recognize the role of educational institutions in processes of cultural and social reproduction (Bourdieu, 1989/1996, pp. 275-6). Instead, the skills and abilities that we regard as dimensions of human capital Bourdieu considered as embodied cultural capital.

<sup>2</sup> Overall response rates to the in-college waves, administered by mail and web (senior year only), were 71 percent for the first year, 65 percent for the second year and 59 percent for the senior year.

<sup>3</sup> For the actual placement of respondents in racial ethnic categories, Census-type questions were used that measure first whether or not the respondent is Hispanic and then elicit a racial category. Virtually all “Hispanic” respondents also reported their race as white, so this group was classified as Latino. Other groups were placed on the basis of this question, which includes bi- and multi-racial options.

<sup>4</sup> Epenshade and Chung (2005, p. 301) report that 76 percent of legacies are white in the 1997 cohort of the *National Study of College Experience*. Howell and Turner (2004, p. 341) show that 87 percent of legacies are white in a recent cohort at the University of Virginia. In comparison, 84 percent of legacies are white in the CLL.

<sup>5</sup> In results not shown, we examine differences on Admissions Committee ratings, collected from institutional files. Legacies had the lowest scores of the four student groups for achievement and personal qualities, and lower scores than other students with college graduate parents for curriculum, essay, test scores, and recommendation letters.

<sup>6</sup> The CLL does not include information about athletes who were recruited during the admissions process. Other items ask students about extracurricular participation, including intercollegiate athletics, in each college year. In the first year, about 56 percent of intercollegiate athletes had SAT scores below their class mean.

<sup>7</sup> In results not shown, we examine other measures of time use during the college years. There are no significant differences between the four student groups in the time spent each week in class, doing homework or studying. Consistent with recent national trends at selective universities (Babcock & Marks, 2008), students spend about 24 hours/week in class or studying during the first year, and about 20 hours by the fourth year. During the first year,

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however, legacies spend significantly more time socializing with friends and partying than other students. Legacies spend about 17.1 hours/week socializing and partying during the first year, compared to about 16.2 hours for other students with college graduate parents and about 12.6 hours for students with no degree parents.

<sup>8</sup> About 46 percent of legacies reported an interest in receiving financial aid in their college admissions form, compared to nearly half of students with professional degree parents, about 59 percent of students with college degree parents and about two-thirds of students with no degree parents. While there is no absolute family income threshold to determine Pell Grant eligibility (other factors include assets, household size and number of family members in college), about 73 percent of students at private universities during the 2003-2004 academic year with a pre-college family income of less than \$35,000/year received a Pell Grant (Berkner, et al., 2005).

## **Appendix A: Dropout Bias and Non-Response Bias**

Registrar's Office data provided information on students who were not enrolled at the end of each survey year. Non-enrollment might occur because of academic or disciplinary probation, medical or personal leave of absence, transfer or dismissal. At the end of the first college year, fewer than one percent of students ( $n = 12$ ) were not enrolled, about three percent ( $n = 48$ ) after the second year and about five percent ( $n = 81$ ) after the fourth year. Tests for differences were conducted using admissions file information of those enrolled versus not enrolled at the end of each survey year. The test variables included racial ethnic group, SAT verbal and mathematics score, high school rank (where available), overall admission rating, parental education, financial aid applicant, type of high school attended and citizenship. Only two differences were significant ( $p < .05$ ): at the end of the first year dropouts had higher SAT-verbal scores, and by the end of the fourth college year dropouts had a lower admissions rating.

Similar tests were conducted comparing respondents and non-respondents for each wave, using the same variable set plus major field area (natural science, social science, humanities or undecided), legacy status, and semester GPA. There are no significant or only few sporadic differences for: racial ethnic category, high school rank, admissions rating, legacy, citizenship, financial aid applicant, and major field. Several other variables show more systematic differences: non-respondents at every wave have lower SAT scores (math.: 9-15 points, verbal: 18-22 points), non-respondents have slightly higher educated parents at waves one and three, non-respondents at every wave are less likely to be from a public high school and somewhat more likely to be from a private (non-religious) high school, and non-respondents have somewhat lower GPA in the previous semester by about one-quarter of a letter grade.

## Appendix B: Description of Variables and Measurement Notes

Variable name	Description
Legacies	Parent/family member graduated from Duke
Race/ethnicity	Census-type questions (see fn. 3)
Citizen	1 = US Citizen (native born and naturalized)
Religious affiliation	Current religious affiliation
Intact family	1 = both parents lived in home, senior year of high school
Household income	Student reported pre-tax household income, recoded from 11 categories to the category midpoint. The highest category -- "\$500,000/year or more" -- was converted to "\$550,000" following linear interpolation
High school type	Type of primary high school attended during senior year
Parents cultural activities	Alpha = .687; three item scale (max. 12) of parents' cultural activities (visit art museum, attend opera/ballet, read) during student's middle school years
Cultural activities	Alpha = .667 (middle school) and .634 (high school); six item scale (max. 24) of students' cultural activities (visit art museum, attend opera/ballet, movie theater, zoo/science center, concert, sport event)
Educational resources	Alpha = .704; ten item scale of educational resources present in student's home during senior year
SAT score	Scholastic aptitude test (max. 1600); most students had SAT scores available while a small number (n = 76) had ACT composite scores which were transformed into analog scores
Academic skills	Alpha = .758 (pre-college), .785 (first year), .788 (second year) and .790 (fourth year); eight item scale (max. 40) of self-assessed abilities: remembering factual knowledge, understanding fundamental concepts, applying knowledge, analyzing arguments, synthesizing information, conducting research, oral expression, and writing skills
Self-assessed ability	Ability comparisons to other students in most challenging class (1 = very much below average, 5 = very much above average); the pre-college measure combines items for the last challenging mathematics and literature courses.
Self-esteem	Alpha = .660 (first year), .707 (second year) and .701 (fourth year). Sum of 3 items (max. 15) from the Rosenberg self-esteem scale (pre-college, items 1 and 2 only): extent to which respondent agrees that 1) on the whole, satisfied with self, 2) do not feel useless at times [reflected] and 3) do not wish could have more self respect [reflected]
Academic self confidence	Confidence in most challenging class (1 = not at all confident, 5 = extremely confident); the pre-college measure combines items for the last challenging mathematics and literature courses
Good student identity	Importance of good student identity to overall identity (1 = not at all important, 5 = extremely important)
Prove self academically	Importance of proving self academically (1 = not at all important, 5 = extremely important)
Hours/week studying	For the college years measures, converted from 6 categories to category midpoint
Major field of study	First year major (expected) from the pre-college survey; final major

Grade point average            from institutional files/transcripts  
   A = 4.0, B = 3.0, C = 2.0, D = 1.0  
Graduation with honors       Cum laude, magna cum laude or summa cum laude

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**Table 1**

Student Background Characteristics (means), by Legacy Status and Parents Education

	Legacies n = 188	Non-alumni parent(s) with:		
		Professional degree n = 358	Other college degree n = 500	No college degree n = 132
<b>Proportion of students</b>				
Race/ethnicity:				
White *	.84	.67	.64	.42
Black *	.03	.06	.08	.26
Latino *	.04	.08	.09	.16
Asian *	.07	.17	.15	.13
Other	.02	.03	.04	.05
US Citizen *	.98	.93	.92	.85
Religious affiliation:				
Protestant *	.52	.26	.42	.41
Catholic *	.11	.23	.23	.31
Jewish *	.07	.18	.08	.02
Other	.30	.33	.27	.26
Intact family *	.87	.87	.81	.68
Household income (\$thousand) *	240.53	253.03	167.51	82.84
Parents social class (EGP):				
I (high grade professionals) *	.77	.91	.62	.32
II (lower grade professionals) *	.14	.05	.24	.21
III (other nonmanual workers) *	.05	.02	.08	.25
IV (manual workers) *	.01	.00	.02	.15
Parents social class missing *	.03	.02	.04	.07
High school type:				
Public *	.61	.64	.72	.80
Religious	.13	.10	.11	.11
Private (non-religious) *	.26	.25	.17	.09
Parents cultural activities *	8.75	8.71	7.85	6.28
Cultural activities (middle school) *	15.62	15.45	14.84	13.67
Cultural activities (high school) *	16.71	16.38	15.90	14.82
Educational resources in home *	9.47	9.30	9.14	8.54
More than 200 books in home *	.80	.76	.66	.34
% of college expenses covered by:				
Parents/family members *	.73	.74	.54	.26
Grants/loans *	.11	.11	.23	.44
Scholarships *	.09	.08	.15	.23
Work *	.03	.03	.04	.05

Note: Weighted estimates; \* p &lt; .05 (two-tailed tests)

Source: *Campus Life and Learning*

**Table 2**

Pre-College Achievement and Admissions Profiles (means), by Legacy Status and Parents Education

	Legacies	Non-alumni parent(s) with:		
		Professional degree	Other college degree	No college degree
SAT (mathematics + verbal) score *	1393.34	1432.97	1404.87	1318.22
SAT score below cohort mean *	.44	.32	.41	.74
Received AP credit *	.87	.85	.84	.72
Expected first year GPA *	3.46	3.57	3.53	3.40
<i>Pre-college human capital</i>				
Academic skills *	31.39	32.46	32.30	31.40
Self-assessed ability *	3.95	4.16	4.10	4.14
Self esteem (max. 10)	7.30	7.68	7.50	7.42
Academic self confidence *	2.95	3.05	2.94	2.85
Good student identity *	4.19	4.40	4.38	4.42
Prove self academically	4.33	4.44	4.45	4.51
Hours/week spent studying	13.65	14.19	13.99	13.33

Note: Weighted estimates; \* p &lt; .05 (two-tailed tests)

Source: *Campus Life and Learning*

**Table 3**  
 Logistic Regression of Legacy Status on Student  
 Background and Pre-College Achievement

	Odds-ratio	(t-score)
Race/ethnicity:		
Black	.202 *	(-4.58)
Latino	.393 *	(-2.60)
Asian	.425 *	(-2.46)
Other	.437	(-1.65)
US Citizen	2.677 *	(1.99)
Religious affiliation:		
Catholic	.281 *	(-4.47)
Jewish	.278 *	(-3.46)
Other	.932	(-.30)
Intact family	.944	(-.21)
Household income (\$thousand)	1.000	(.35)
Mother's education <sup>a</sup>	1.052	(.46)
Father's education <sup>a</sup>	1.371 *	(2.85)
% of college expenses covered by:		
Parents/family members	1.771	(1.68)
High school type:		
Public	.966	(-.15)
Religious	1.655	(1.47)
Parents cultural activities	1.012	(.21)
Cultural activities (high school)	1.022	(.61)
Educational resources in home	1.104	(1.05)
More than 200 books in home	1.275	(1.00)
SAT score	.996 *	(-3.62)
Received AP Credit	1.371	(1.11)
<i>Pseudo-R<sup>2</sup></i>	.138	

Note: Weighted estimates; \* p < .05 (two-tailed tests)

Source: *Campus Life and Learning* (n = 1178)

Reference categories: white, Protestant, private high school

<sup>a</sup> 1=less than college degree, 2=bachelor's degree, 3=some graduate school/master's degree, 4=professional degree

**Table 4**

OLS Regression of First Year Cumulative GPA on Legacy Status, Student Background and Pre-College Human Capital

	Model 1		Model 2		Model 3	
	coeff.	(s.e.)	coeff.	(s.e.)	coeff.	(s.e.)
Legacies	-.129 *	(.047)	-.093 *	(.044)	-.072	(.043)
Parents - other college degree	-.092 *	(.035)	-.060	(.034)	-.050	(.034)
Parents - no college degree	-.247 *	(.053)	-.050	(.052)	-.040	(.053)
Race/ethnicity:						
Black			-.279 *	(.046)	-.285 *	(.046)
Latino			-.062	(.040)	-.072	(.039)
Asian			-.006	(.040)	-.014	(.040)
Other			-.054	(.059)	-.067	(.057)
Female			.086 *	(.029)	.079 *	(.029)
US Citizen			-.081	(.049)	-.082	(.050)
Household income (\$thousand)			.000	(.000)	.000	(.000)
High school type:						
Public			.015	(.037)	.008	(.038)
Religious			-.026	(.054)	-.027	(.055)
SAT score			.001 *	(.000)	.001 *	(.000)
Received AP Credit			.091 *	(.042)	.082 *	(.042)
Major field of study:						
Social sciences			.110 *	(.035)	.134 *	(.036)
Humanities			.142 *	(.059)	.176 *	(.061)
Other/undecided			.048	(.035)	.073 *	(.035)
<i>Pre-College Human Capital</i>						
Academic skills					-.005	(.004)
Self-assessed ability					.066 *	(.026)
Self esteem					.016	(.009)
Academic self confidence					.009	(.023)
Good student identity					.035	(.019)
Prove self academically					-.009	(.018)
Hours/week spent studying					.005 *	(.002)
Constant	3.358 *	(.027)	1.301 *	(.204)	.816 *	(.263)
$R^2$	.021		.199		.221	

Note: Weighted estimates; \* p < .05 (two-tailed tests)

Source: *Campus Life and Learning* (n = 1178)

Reference categories: parents-professional degree, white, private high school, natural science major

**Table 5**

Within-College Human Capital (means), by Legacy Status and Parents Education

	Legacies	Non-alumni parent(s) with:		
		Professional degree	Other college degree	No college degree
<b>Academic skills</b>				
First year *	28.73	29.48	29.13	27.78
Second year *	28.88	29.48	29.39	28.05
Fourth year	31.65	32.01	32.10	31.00
<b>Self-assessed ability</b>				
First year *	3.18	3.40	3.19	2.98
Second year *	3.25	3.42	3.16	3.11
Fourth year	3.31	3.48	3.35	3.37
<b>Self esteem (max. 15)</b>				
First year	10.11	10.43	10.34	9.76
Second year	10.44	10.82	10.50	10.05
Fourth year	10.74	11.08	10.82	10.58
<b>Academic self confidence</b>				
First year *	2.48	2.70	2.44	2.25
Second year	2.55	2.60	2.51	2.37
Fourth year	2.76	2.74	2.79	2.78
<b>Good student identity</b>				
First year *	3.86	4.18	4.16	4.19
Second year *	3.81	4.06	4.02	3.81
Fourth year *	3.72	4.13	4.00	3.81
<b>Prove self academically</b>				
First year *	4.06	4.22	4.29	4.30
<b>Hours/week spent studying</b>				
First year	10.35	10.68	10.92	11.15
Second year	11.00	10.46	10.50	10.55
Fourth year	9.42	9.85	9.36	9.34

Note: Weighted estimates; \*  $p < .05$  (two-tailed tests)Source: *Campus Life and Learning*

**Table 6**

Final College Academic Outcomes and Post-Graduation Plans (means), by Legacy Status and Parents Education

	Legacies	Non-alumni parent(s) with:		
		Professional degree	Other college degree	No college degree
<i>Final/declared major field of study:</i>				
Natural sciences/engineering *	.25	.41	.37	.37
Social sciences	.50	.44	.49	.43
Humanities *	.25	.15	.14	.20
Graduation with honors *	.24	.35	.23	.17
Final (cumulative) GPA *	3.38	3.46	3.38	3.28
<i>Plans for the fall after graduation</i>				
Used family/personal contacts *	.65	.45	.54	.46
<i>Primary activity:</i>				
Attend school	.30	.40	.38	.42
Work	.55	.52	.53	.57
Other *	.15	.08	.09	.01
<i>If attending school, degree pursuing:</i>				
Bachelor's	.07	.05	.12	.12
Master's (including MBA)	.20	.16	.16	.21
Professional (MD, JD, PhD)	.73	.79	.71	.67
<i>If working:</i>				
Expected income (\$thousand)	44.02	45.51	42.56	41.98
<i>Plans for five years after graduation</i>				
<i>Highest degree earned or in progress:</i>				
Bachelor's *	.14	.06	.11	.02
Master's	.39	.32	.35	.37
Professional *	.44	.61	.52	.60
<i>Occupation:</i>				
Lawyer	.17	.19	.18	.17
Executive/manager	.16	.17	.18	.11
Medical doctor *	.10	.22	.12	.21
Professor/scientist	.08	.09	.11	.15
Engineer *	.02	.03	.08	.08
Other occupation	.20	.16	.14	.18
Occupation plans missing *	.25	.13	.18	.11

Note: Weighted estimates; \* p &lt; .05 (two-tailed tests)

Source: *Campus Life and Learning*

**Figure 1**  
Semester Grade Point Averages, by Legacy Status and Parents Education

