COLLEGES AND THEIR CUSTOMERS: THE MARKET FOR BACCALAUREATE EDUCATION IN THE AGE OF MERIT AND DISPARITY

Charles T. Clotfelter

Abstract

Although American universities dominate lists of the world's best research universities and act as magnets for many of the world's most promising graduate students, America's ranking in undergraduate education is much less secure. The U.S. has fallen behind other developed countries in degree attainment, and the skills of its young people are lackluster in international comparisons. One source of concern is the large and growing gaps in enrollment and completion between those at high and low income levels. Such equity issues are especially salient, given the sustained transformation in the income distribution that has taken place in the nation. This paper examines the market for baccalaureate education over the last four decades, focusing on the demand side of the market, especially on enrollment gaps by socioeconomic status. It examines how students have distributed themselves across colleges, beginning with the kind of scholastic sorting that is a familiar aspect of the college market. It has been argued that this sorting has intensified, as part of the evolution of the market from a set of regional oligopolies in the direction of a single integrated national market. The paper asks whether this scholastic sorting has been accompanied by sorting along other dimensions, such as socioeconomic status, race/ethnicity, and academic orientation. It notes as well another possible pathway by which changes in the income distribution might have affected the market for college, by way of charitable contributions.

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The market for baccalaureate education in the United States entered the 1970s still reeling from political upheaval and financial uncertainty. As college leaders fretted about the financial viability of teetering colleges, a decade of momentous social change came to a crescendo on college campuses with protests and violence. What happened to this market over the next four decades could hardly have been foreseen. Certainly no one writing about higher education at the beginning of that decade was predicting the changes that did in fact come about. Issues that had fueled protests would quickly recede. Changes once unthinkable would quietly become absorbed into the day-to-day reality of American higher education. But other forces – economic, technological, and social – would help bring about a surprisingly thoroughgoing, albeit subtle, remolding of the American baccalaureate marketplace. This reshaping occurred without teach-ins, building takeovers, or violent protests. Nor was the picture-postcard public face of colleges and universities much affected. But change did occur, as is its wont.

This paper begins by describing several broad trends that would drive this subtle transformation in the market for college. One overarching theme is the widening geographic reach of colleges, a gradual shift in horizon from local to regional to national. Previous research has argued that the increasingly national character of the market has been accompanied by a heightened degree of sorting by academic aptitude. I ask whether this acceleration in scholastic segregation has in turn brought with it segregation along other dimensions, including socioeconomic status. Many commentators have charged that the baccalaureate marketplace has indeed been touched by the same economic disparities that have infected the economy in general. Addressing this question is largely a descriptive undertaking, for which I employ data for a wide array of four-year colleges and universities. The paper's second section describes data I will use

[1] I am grateful for research assistance to Danielle Vance-McMullen, for financial support to the Center for the Study of Philanthropy and Voluntarism and the Sanford School of Public Policy at Duke University and the Straus Institute at the New York University School of Law, for helpful discussions to Anthony Broh, Edward Fiske, and colleagues at the Straus Institute, and for data to the Higher Education Research Institute at UCLA and the Council for Aid to Education. The views expressed are mine and do not necessarily reflect those of any organization or person.

to trace changes over time in this market. Succeeding sections present the findings, focusing on what the changing patterns have meant for stratification, both academic and socioeconomic.

A..Three Noteworthy Trends

The market for college is inevitably influenced by the larger economy. During the four decades covered by this study, the American economy underwent significant changes. Among them were a steady decline in the importance of manufacturing, rising international competition, the explosive growth of computers and their application to myriad uses, the rise of high-tech regions and metropolitan areas at the expense of rural and rust belt areas, and an increasingly diverse workforce – driven by civil rights enforcement, rising female labor force participation, and a growing number of foreign-born workers, both skilled and unskilled. All of these trends affected colleges and universities, but three were especially significant for the baccalaureate market: the growth in income inequality, the rising share of minorities, and technological change in computing, communication, and transportation

Growing income inequality

Beginning sometime around 1980 the American income distribution began what would become a sustained process of reshaping itself. Incomes at the top of the distribution, especially those at the very top, began to grow at rates far higher than those of everyone else. Figure 3.1 traces the fortunes of middle-income families by comparing their average incomes to those of families in the top 5% of the income distribution. Between 1967 and 1981, those in that middle group did better, enjoying income growth of 16%, as compared to just 1% for the top 5%. But then the fortunes of these two groups began to diverge markedly. Between 1981 and 2006, on the eve of the Great Recession, incomes of the middle fifth rose, after inflation, by 21%, an average growth rate of less than 0.8% a year. Over the same period, incomes of those in the top 5% more than doubled, increasing an average of 3% each year, after inflation. Measured from 1981 to 2012, the two groups experienced increases in average income of 14% and 96%, respectively.[2]

The growing income inequality evident in this comparison played out across the income distribution. Between 1981 and 2012, families in the next to lowest one fifth saw their incomes in real terms increase just 7%, and for those in the bottom fifth, average income actually

[2] Relative to 1967, the inflation-adjusted incomes in 1981, 2006, and 2012, respectively, were: for the middle 20%, 116, 140, and 132; for the top 5%, 101, 212, 198. Growth rates here and elsewhere are exponential, based on the equation $X_1 = e^{rt}$, where X_0 is the initial value, X_1 is the final value, and t is the number of years between them.

declined, by 6%.[3] At the very top of the distribution, by contrast, incomes shot up at astronomical rates. The top 1% of households, made famous during the 2012 presidential election, saw their average, inflation-adjusted income almost triple between 1981 and 2012, rising by 180%.[4] Taken together, these trends spelled increasing income inequality. Reflecting this inequality, the Gini coefficient calculated for household income, rose from 0.406 in 1981 to 0.477 in 2012, as shown in Figure 3.2. Inequality of another kind also increased during these decades – household wealth. Driven by rapid increases in net worth by those at the top of the wealth distribution, wealth inequality rose during the 1980s, remained steady until the Great Recession, but then jumped sharply after 2007. Driving that post-2007 increase was a fall in the net worth of middle-class households, caused in large part by the precipitous drop in house prices and the accompanying wave of foreclosures. Black and Hispanic households were particularly hard-hit. Reflecting these developments, the Gini coefficient for household net worth, after remaining roughly steady for nearly two decades, jumped after 2007, from 0.834 to 0.870 in 2010.[5]

These profound changes in the nation's income distribution could not but influence the market for college. Granting that the causal chains undoubtedly run in both directions between the distribution of income and the nation's colleges and universities, changes in the income distribution might affect the market for college in at least four ways. Probably the most obvious way is by putting more money in the bank accounts of some customers, and less into others'. Affluent parents of college-age children have enjoyed a very good run for three decades, making the high tuition rates of many private colleges a feasible outlay even without financial aid. As we will see, the tuition list price – the price before any financial aid – has been increasing faster than the rate of prices or incomes in general.[6] All this is to make the rather obvious point that access to money makes most consumer purchases easier, including paying for college. And this logic extends to other outlays besides tuition and fees. For example, colleges typically charge not inconsequential fees -- $80 was typical in 2014 – just to process an application, fees that can

[3] Average inflation-corrected family incomes in 1981 and 2012, respectively, were: for the bottom quintile, $16,480 and $15,534; for the second, $35,837 and $38,184; and for the middle, $54,812 and $62,464. Source: U.S. Census Bureau, http://www.census.gov/hhes/www/income/data/historical/inequality/index.html, 1/29/14.

[4] Average income for the top 1%, as given by Piketty and Saez, in 2012 dollars (I think) was: $468,075 in 1967, $449,989 in 1981, and $1,264,065 in 2012.

[5] Wolff (2012, 2013). [compare to other countries, both 2012 level and increase over this period] [address mobility here?]

[6] Beginning in 2000, list price tuition rates have risen much faster even than top 5% income.

quickly add up for high school seniors applying to multiple colleges.[7] To be sure, these obvious considerations are complicated by the widespread availability of need-based financial aid, assistance that can extend even to application fees. Much more will be said about financial aid below. For the present, the point to be made is that families with higher incomes almost always have an advantage compared to the less affluent when it comes to having the financial wherewithal to send their children to college. At the top end of America's income distribution, therefore, rising college costs are less intimidating than for everybody else.

A second reason the growing income inequality has likely affected the college market is that *wage* inequality, not so much disparities in income from capital, is the chief source of overall income inequality, and wages are highly correlated with educational attainment. The idea that a college education is a sound financial investment seems readily apparent, simply by comparing the median incomes of college graduates to those with just a high school diploma. To make this comparison cleaner, calculations are typically restricted to full-time workers in a certain age range, such as 25-34. The percentage gap between these two incomes – dubbed the "college earnings advantage" – has grown steadily since 1972, despite the steady outpouring of new college graduates. For men, this earning advantage rose from 22% in 1972 to 57% in 1992 and to 70% in 2012. For women, it increased from 42% in 1972, to 57% in 1992, and to 82% in 2012.[8] Although this easily calculated percentage gap is often taken as a measure of the financial payoff from attending college, it is by no means a complete or even altogether accurate measure, since it ignores the costs of attendance as well as the complex issue of assigning causal significance to observed differences in earnings. There is also evidence that that the earnings of college graduates may have stopped growing after 2000, with recent research suggesting that the demand for cognitive skills has declined, forcing college graduates to take jobs formerly filled by less educated workers.[9] Notwithstanding these complications, there can be little doubt that the "college earnings advantage" is a persuasive piece of evidence for many that getting a college degree is a smart investment of time and money, thus fueling the demand for college.

[7] In 2009, applicants applied to a median of four colleges. HERI, "2009 CIRP Freshman Survey, Weighted National Norms—All Respondents."
[8] Baum (2014, Figure 4, p. 6).
[9] In the post-2000 period, write Beaudry et al. (2013, p. 3), "having a BA is less about obtaining access to high paying managerial and technology jobs and more about beating out less educated workers for the Barista or clerical job."

A third reason why the changing income distribution could have an important effect on the market for college is the strong likelihood that family income – quite apart from family characteristics that are merely correlated with it – influences a young person's chance of getting into a competitive college. In a host of ways, affluence could enhance the education of children and their academic readiness for college. Family income is correlated with any number of potentially consequential variables, among them well-financed public schools, neighborhood amenities, travel and other summer enrichment experiences, and private school attendance. The economic disparities in spending and teacher quality in public schools are among the nation's most persistent policy challenges. But the advantages of income extend beyond the school day. In 1972-73, households in the top income quintile spent an average of $3,536 (in 2008 dollars) on child-enrichment goods and services such as music lessons and summer camp while households in the bottom quintile averaged just $835. Three decades later, in 2005-06, the corresponding average expenditures were $8,872 for top-quintile households, compared to just $1,315 for those in the bottom quintile.[10] Thus, over this period of diverging incomes, spending on children's enrichment by top-quintile households, which already dwarfed the low-income average, increased twice as fast (2.8% versus 1.4% a year). In addition to ways that affluent parents might help their children's admissions prospects by enhancing their children's educational development, money can buy better prospects through expenditures that are more strategic than educational. Examples that come to mind include SAT-preparation courses, taking the SAT multiple times, applying to multiple colleges, not to mention private schools or living in an expensive public school district.[11] All of these cost money. At the extreme, they can cost a lot of money, as illustrated by private college counselors and SAT tutors charging $350 an hour to coach students in their East Hamptons summer communities.[12] Such efforts have inspired satire. Consider the advice given to anxious parents in a wealthy New York suburb in the fictional *Jane Austen in Scarsdale* about crafting college applications: "If they need material, look into the new teen tours to impoverished locales. Maybe they can irrigate the desert or defuse land mines. It's

[10] Duncan and Murnane (2011, p. 11). Their calculations are based on data from the Consumer Expenditure Survey.
[11] Vigdor and Clotfelter (2003).
[12] For two articles about these methods of preparation, see Anderson, Jenny, "For a Standout College Essay, Applicants Fill Their Summers," *New York Times*, August 5, 2011 and Jenny Anderson, "A Hamptons Summer: Beach, Horses and SAT Prep," *New York Times*, August 13, 2012.

best if it's on a world scale and connects with current events. 'Save the whales' isn't going to cut it anymore."[13]

A fourth possible connection between the nation's income distribution and the market for college comes not by way of prospective students, but rather by way of donors. Among the sub-sectors of the vast array of organizations receiving charitable contributions, universities rank near the top. It is a well-established fact that income is positively correlated with charitable giving, and that high-income donors tend to devote a disproportionate share of their giving to colleges and universities.[14] The question remains whether these tendencies have played out over the decades of growing income inequality to change the pattern of donations to colleges and universities and, if so, which institutions have benefited most within the higher education domain.[15]

Rising share of minorities

A second broad trend affecting the market for college was a remarkable transformation in the racial and ethnic composition of students. Both demography and policy were at work: a rapid evolution in the race/ethnicity makeup of the population joined with an even more rapid dismantling of state-sanctioned racial segregation. The first of the changes in the racial composition of college students, is easily observed, though comparisons over time are complicated because categories used in surveys have evolved over time. Moreover, government statisticians seem reluctant even to devise tables showing demographic changes in race and ethnicity composition over time. One way of appreciating the changes that have occurred over time, while using modern classifications, is to compare the contemporary composition of different age cohorts. This approach is imperfect, of course, because the composition of older cohorts naturally reflects the effects over time of immigration and mortality. Bearing these complications in mind, Figure 3.3 shows the racial and ethnic breakdown of three cohorts that would have participated in the three waves of Freshman Surveys examined below, using today's race/ethnicity classifications. Reflecting the change that occurred over time, these shifting distributions are the demographic underpinnings of the rising share of nonwhites in these cohorts of college students. How these distributions translated into shares among college students

[13] Cohen (2006, p. 5.)
[14] See, for example, Clotfelter (1985, ch. 2).
[15] Hoxby (1999) notes this source of support.

depended on enrollment rates, in postsecondary education of any sort and in four-year colleges in particular.[16]

The other force affecting racial patterns in colleges was the demise of racial segregation in all, or nearly all, of American higher education. Owing to the strict racial segregation laws and practices in the former states of the Confederacy, virtually no colleges in that region had more than a slightest hint of interracial enrollment at the undergraduate level until the late 1960s. Before the 1954 *Brown* decision, colleges in the South and Border states were strictly segregated, except for a few court cases had found small cracks in Jim Crow segregation in graduate programs.[17] After *Brown*, the Border states moved to desegregate their public university systems, but the states of the former Confederacy mostly stalled until the mid-1960s, as illustrated by the median segregation rates shown in Figure 3.4 calculated for the two regions. By 1976 white students in state-supported colleges and universities in half of the states in the South were on campuses where the percentage of nonwhites was at least half what it would have been if students had been distributed evenly across all campuses. By and large, private colleges and universities in the South followed suit. Yet one component of racial segregation stubbornly persisted, in the form of the historically black colleges and universities. Created to serve black students in the era of state-sanctioned segregation, they continued, and continue, to serve a predominantly black clientele, with predictable results for overall levels of racial segregation in higher education, both public and private. To see how these changes in racial mix and segregation policies affected enrollments in the country's four-year colleges, I present in the next section a series of figures that compare the levels of and changes in a variety of measures of racial and ethnic composition in groups of colleges.

Technological change

Although it is easy in the 21st century to take them for granted, developments in transportation and revolutionary ones in communications constitute a third important trend

[16] In fact, rates of enrollment for Hispanic students in four-year institutions lagged, one result being that Hispanic college enrollment rates were lower than those for blacks as well as whites. Whereas the black share of undergraduates in 2010 was about 1 percentage point less than lagged the black share of the cohort that turned 18 in 2008, the corresponding gap for Hispanics was nearly 4 percentage points. Of the nonwhite groups shown, only Asian and Pacific Islanders had a share of undergraduates larger than their share of the populationFigure 3.x[in appendix] shows the racial distribution of undergraduate students attending two- and four-year colleges in three different years, beginning in 1976. The bars reveal a marked decline in the percentage of white students, particularly in the two decades following 1990. The growing share of Hispanic students accounts for about half of that decline in the percentage of whites. The rest of it is due to rising shares of all the other identified groups.

[17] *After Brown*

affecting the market for college. On the demand side, these developments had the effect of diminishing the significance of distance. The Interstate Highway System, authorized in 1956, was nearly complete by 1980, totaling some 40,000 miles altogether, making automobile travel faster and safer.[18] Commercial airlines replaced propellers with jets, cutting the flight time from New York to San Francisco from 11½ to 6½ hours.[19]

Technological change came as well to communications, with a vengeance. As difficult as it might be to imagine today, it was not uncommon in 1970 for students away at college to write letters, with stamps, to communicate with parents and sweethearts back home. In those days a 10-minute phone call in the lower 48 states could cost as much as $29 (in 2010 dollars). But technological change and deregulation combined to drive down the cost of long-distance. Adjusting for inflation, the cost of coast-to-coast calls fell by more than 85% between 1970 and 1990. By 2010, the cost was just a tenth what it had been 40 years earlier.[20] Even more dramatic was the effect of computers and email on the ease and cost of long-distance communication. By way of these developments in transportation and communications, the power of distance to influence the college choices of students and their families inevitably receded. As automobiles expanded the geographical reach of retail grocers, allowing supermarkets to replace corner stores, these late 20th century technological advances allowed colleges to expand their geographic reach.

On the supply side, there can be little question that the innovation of greatest import was the computer, and the communication lines connecting them. By way of word processing, the functions once performed by typists were gradually transferred to faculty and staff to themselves. Routine bookkeeping and other clerical functions became automated, eliminating other jobs. And answering the phone for other people almost disappeared as a job description. Among the buildings on college and university campuses most thoroughly affected were libraries, although the functions of the registrar, the controller, and the admissions office were also profoundly

[18] Cox, Wendell and Jean Love, "40 Years of the US Interstate Highway System: An Analysis," June 1996, http://www.publicpurpose.com/freeway1.htm, 3/14/14.

[19] Smithsonian Institution, *America by Air*, http://airandspace.si.edu/exhibitions/america-by-air/online/flyacross/index.cfm, 3/14/14.

[20] According to Hoxby (2009, p. 8), the cost of a 10-minute coast-to-coast phone call (in 2005 dollars) was $25.91 in 1970, $3.97 in 1990, and $2.61 in 2005. According to the Federal Communication Commission's *Universal Service Monitoring Report* for 2010, the cost per minute fell from 2005 to 2010, in constant dollars, by 3% (Table 7.8), http://transition.fcc.gov/wcb/iatd/monitor.html, 3/14/14.

affected. Yet research, all across the campus, would also have a claim to having been reshaped by computers, which allowed scholars to perform previously unimaginable tasks in seconds. Volumes could be written about these supply-side effects, and a number have been. It is enough for the present merely to note their profound influence on the market for college.[21]

B. Data for Examining Changes in Patterns of Demand

The purpose of this paper is to describe changes in the market for college in the U.S., focusing on the demand side. To do this, I trace patterns of enrollment across colleges of different kinds. I classify colleges principally by selectivity, split between public and private. In describing enrollment patterns, I aim to go beyond the categories ordinarily employed in studies of stratification. One data set that is well suited for identifying such patterns is the Freshman Survey, an annual survey administered by the Higher Education Research Institute at UCLA (HERI). This survey is a good source of data for the project at hand because of the length of time the survey has been operating, the fact that a large number of colleges have participated in many years, and the high degree of stability in the questions asked. I collected information on first-year students attending 188 colleges and universities. To see how these patterns might have changed over time, I collected this information for students attending these same institutions at the beginning, middle and end of the nearly four-decade period, 1972-2009. In order to gather enough colleges in the sample to insure groups of at least five colleges each (a requirement imposed to protect the identities of individual colleges), I selected, in addition to the year 1972, two pairs of years separated by roughly two decades – 1989/90 and 2008/09 –and then identified colleges that participated in the survey in at least one of the two years in each pair. From among the many items covered by the annual Freshman Surveys, I requested data for a number that have been included in the survey in multiple years, to make it possible to explore trends over time.

Although confidentiality agreements preclude identifying students' specific colleges, the owners of the data, the Higher Education Research Institute (HERI), does allow data to be identified by groups of colleges of five or more. In light of this restriction, I chose to divide the 188 colleges into 17 groups, defined according to three characteristics: the average SAT of their

[21] Other changes: rise and fall of number of 18 year olds; move to South and West. Also the regional distribution is changing: people moving to South and West. One way to chart this: number of high school grads by state. I have this for 73/74 from Digest of Ed Stat. Filed in Documentation – General.//and 08/09 also there.

students around 1970, whether they were public or private institutions, and whether they are historically black (HBCUs).[22] As will be clear in subsequent discussion, the first of these criteria, average SAT, has precedent in previous research on higher education in the U.S. The other criteria are distinctions that have tremendous historical and practical importance in American higher education. The resulting sample comprises a panel formed by groups of similar colleges, each group of colleges remaining the same over the entire period.

To form SAT percentiles, colleges were ranked by average SAT in 1970.[23] Then percentiles were calculated based on the number of students enrolled in 1970. Thus the 98-100 percentile group of colleges enrolled approximately 2% of all college students in 1970, those attending the colleges with the highest average SAT scores. Only after this percentile designation was made were colleges divided into groups.

Table 3.1 [C-3] provides descriptive information for the 17 groups of colleges in the sample. As noted above, the historically black institutions, split into private and public, are separated out, and the remaining institutions are divided between public and private and according to the average SAT of their entering first-year students in 1970. The resulting groupings, shown in the table, yield groups of colleges that contain between 5 and 24 colleges each. Owing to the large number of private colleges near the top of the score distribution that participated in the Freshman Survey, groups of colleges among the most selective private institutions could be formed using finer SAT gradations. The generally smaller enrollments of private colleges are evident from the average number of first-year students surveyed. Assuming first-year students constitute roughly a fourth of all undergraduates, these sampled colleges would have had undergraduate enrollments ranging from about 3,500 to 11,200 for private institutions and 17,600 to 47,400 for public ones in the sample.

Because it is restricted to four-year colleges, the sample necessarily leaves out the fastest-growing segments of American postsecondary education, two-year and for-profit institutions. This restriction can be justified on the basis of the importance of four-year institutions and the advantages inherent in comparing relatively similar institutions. Even among four-year institutions, however, considerable heterogeneity remains, as will be evident from the differences that will be evident among the comparison groups. One anomaly of this sample is the admittedly

[22] As noted below, for some analyses one of these groups was further divided into three sub-groups.
[23] Information for the closest year was used if none was available for 1970.

unrepresentative nature of the highest-SAT public institutions, those at the 90th percentile and above. Among the half dozen colleges in this group are three of the country's service academies – West Point, the Air Force Academy, and the Coast Guard Academy. These academies are grouped with three of the academically strongest state universities – Stony Brook, Georgia Tech, and the University of California at Santa Cruz.

These data on first-year students serve to illustrate two of the most significant demographic developments in who is going to college. One of these has to do with gender – how many women are going to college, and where they are going. For all students in four-year colleges, the share that was female has been growing steadily over time. As an illustration, among all students in the country's degree-granting institutions, the share of students who were women rose from 41% in 1970 to 55% in 1990 and to 57% in 2010.[24] In addition, the late 1960s and early 1970s saw the rapid adoption of co-education by many formerly all-male colleges and universities, including such storied institutions as Princeton, Yale, Brown, Dartmouth, Davidson, and Amherst.[25] These two broad trends are reflected among the 188 colleges in our sample. As can be seen in Figure 3.5 [C-5], the shares of women increased steadily in every one of the 11 groups of private institutions and in two of the groups of public ones. These increases were especially evident among private colleges in the highest SAT categories, several of which had been all-male in the 1960s and two that were all-male in 1972, Amherst and Haverford. Increases were also sizable in the highest-scoring group of public institutions, a group that includes three service academies, as noted above, which had been all-male. By 2008/09 all of the groups except this one had a majority of women among first-year students in the sample.

As significant as these changes in gender composition have been, they are overshadowed by dramatic shifts in racial patterns, shifts that began in the 1960s as part of the momentous civil rights movement. The 1960s witnessed the end of Jim Crow segregation of schools and colleges in the South, which joined the Border states in quickly desegregating its public colleges and universities. This desegregation is quantified in Figure 3.6, which plots white-nonwhite segregation in selected years. By 1972, most predominantly white colleges and universities across the country, private as well as public, had black students. In fact, by 1972 most of the

[24] *Digest of Education Statistics 2012,* Table 221, p. 319.
[25] Information on years colleges became co-ed taken from College Express, http://www.collegexpress.com/lists/list/years-that-mens-colleges-became-co-ed/366/, 2/14/14.

increase in the share of black students in four-year institutions had taken place, with surprisingly little increase after that. Based on a weighted average of the 188 colleges in the sample, the overall percentage of black students in four-year colleges, excluding international students, rose from 7.1% in 1972 to 9.2% in 1989/90 and then declined to 7.8% in 2008/09. Excluding HBCUs, the percentage black was 4.0% in 1972, 6.0% in 1989/90, and 5.0% in 2008/09.[26]

In contrast to African Americans, students in two other racial/ethnic categories markedly increased their shares among college students, and this growth is evident in our sample. Hispanic students grew as a share of all four-year college students. Whereas they made up less than 1% of students in 1972, their share increased over the next two decades, more than doubling in most groups of colleges. In our sample, the increases were especially large for three groups: the ten private institutions in the 50-60th percentile range (this group included two in Texas and another in California), the five public universities in the 80-90th percentile group that included UC Santa Barbara, and the highest ranking public institutions (which included three service academies and UC Santa Cruz).

For Asian students, the growth was even more spectacular. In 1972 they were few and far between among the first-year students in our sample, accounting for less than 1% of all students in all but one group. Two decades later, these shares had increased across the board, reaching 8% in the top-SAT private and public institutions. And the shares increased again over the next two decades. By 2008/09, Asian students made up 15% of the students at the private and public institutions in the highest SAT categories, as defined by 1970 average SAT levels.

Another driver of diversity in several of the college groups was an increase in the share of students who were foreign nationals. Although for most groups of colleges foreign students began and remained a small share of the total, especially in the bulk of public institutions, among private colleges inhabiting the top decile of 1970 scores foreign students accounted for a growing share, rising over 8% in 2008/09 for private colleges at 98% and above.

Taken together, these shifts in race/ethnicity produced a sea-change in diversity among private colleges and the top public ones. These changes are summarized in Figure 3.6, which shows that by 2008/09 the percentage nonwhite (including foreign nationals) exceeded 30% in the top three groups of private colleges, the top group of publics, and, as one would expect, in the

[26] Enrollment-weighted averages based on Freshman Survey responses for first-year students entering the 188 colleges in the sample. C-26.

HBCUs, which began and remained almost entirely nonwhite. As significant as the rising share of women might be, the big demographic story for the college market over these four decades is much the same as the demographic story for the nation as a whole. Whites remain a majority, but their numerical predominance has waned. This growing diversity, driven by an historic civil rights movement and high rates of immigration, suggests opened doors, wider access, and new opportunities. Yet that vision of a new meritocracy is, at best, too simplistic and, at worst, a mirage, for it must be reconciled with seemingly contradictory facts, as we will see.

C. An Evolving National Market for College

In the 1973 movie *American Graffiti*, actor Richard Dreyfuss plays Curt, a recent high school graduate living in the San Joaquin Valley of California. In the movie's final minutes he boards an airplane en route to the East Coast, where he will attend college. For most students and their families during the couple of decades after World War II, attending a college 3,000 miles away from home would have been unthinkable. But, as propellers gave way to jets and expensive long-distance calls were replaced by cheap long distance and Skype, these barriers have receded over time. As described by economist Caroline Hoxby, forces such as these had the effect of transforming what had been a collection of mostly state-wide or regional markets for college into a network that began to look national in scope.[27] In ticking off the forces that enabled this evolution, Hoxby cites, among other things, the advent of standardized tests used in college admissions, in the 1940s, and the steady decline in the costs of transportation and communication. The standardized tests provided college admissions offices with cheap and comparable information on the academic readiness of students outside their localities or personal networks. The scores, augmented by the development and acceptance of a standardized method of assessing the financial need of applicants, also gave applicants more reliable information by which to assess their own prospects for admission.[28] And the falling costs of transportation and communication had the effect of diminishing the practical and psychological barrier of remote places, as it was doing with travel and immigration.

With distance deemphasized and information more readily available, students like Curt could seriously consider colleges once unthinkable. The result, according to Hoxby, was a re-

[27] Hoxby (1997, 2009).
[28] Hoxby (1997, p. 11).

molding of the nation's market for college. Students with the best academic credentials could look beyond their state and region in hopes of attending one of the nation's most selective colleges. And, on the strength of that kind of interest, those selective colleges could in turn become pickier in their admissions decisions. As less selective colleges lost their hold over top students living nearby, these colleges increasingly had to settle for students a notch or two down the academic ladder. If this story is accurate, there would be three verifiable effects. First, the distance that students go to attend college would have increased over time, particularly for students at the top of the college readiness/SAT pile. Second, successive cohorts of students would begin to re-sort themselves, in terms of measured aptitude, increasing the degree of scholastic segregation across colleges. In terms of the average academic credentials of their students, colleges would tend to drift apart, as the top colleges garnered more of the best students, leaving the less prepared students for the remaining colleges. This increasing segregation would also produce, as a corollary effect, student bodies more homogeneous in academic terms. The third implication of the hypothesis noted by Hoxby is that the correlation between colleges' resources and the aptitude of their students would increase, since the re-sorting process puts the strongest students into the best-endowed colleges. The sorting should be on the basis of aptitude, not family income, Hoxby argues, so a fourth implication is that the correlation between resources and students' family incomes would decrease.

Having collected and analyzed archival data for hundreds of colleges, Hoxby presents evidence that these changes did in fact take place. Using data for a panel of 1,551 four-year colleges, she calculated the percentage of students who attended college within their home state. Among students at public colleges, the share fell from 96% in 1949 to 84% in 1994. For those attending private colleges, the decline was considerably steeper, with the in-state share falling from 80% in 1949 to 55% in 1994.[29]

To test the second implication, of increased scholastic segregation, she presents data on differences in SAT scores between and within colleges. To show that differences in student aptitude between colleges have increased, she analyzed data from 1,121 colleges for years from 1966 to 1991, comparing college-wide average SAT levels. She found that the gaps did increase, using a variety of measures of dispersion. For example, the gap between the average SAT score at the college at the 25th percentile and that for the college at the 75th percentile increased, rising

[29] Hoxby (1997, Table 1a, p. 46)

from 69 points in 1966 to 180 points in 1991. This growing dispersion occurred within private colleges and public colleges alike. Notably, it was almost entirely the result of falling SAT levels at lower-ranked colleges.[30] To show that colleges became more homogeneous over time, in terms of student aptitude, Hoxby used data on the distribution of scores by college to calculate standard deviations of scores for the 1,121 colleges in her sample for the same 25-year period, summarizing them as enrollment-weighted averages, separated into public and private and size category. Here again, her calculations are consistent with the hypothesis, with the average standard deviations falling monotonically for every one of the categories, the average decline being about 30%.[31]

I turn now to see if data from the sample of 188 colleges described above are also consistent with the Hoxby hypothesis. In organizing the Freshman Survey data by college groups, I aimed to create a panel that would be similar in structure to the sample of college-level data analyzed by Hoxby. The result is another panel of colleges, only smaller in number and later in time. Unlike Hoxby's, the sample used in the present study contains survey responses provided by individual students, each of whom is identified with a group of similar colleges, not a particular institution.

Figure 3.7 addresses the first implication, that the distance that students travel to go to college will increase over time, as the costs associated with distance recede. First-year students were asked in the Freshman Survey to indicate how many miles their college was from their home. Figure 3.7 shows the estimated average number of miles traveled for the students in each of the 17 college groups in each of the three years covered by the sample.[32] By and large, average distances did go up over time. Even after the period examined by Hoxby, therefore, the tendency she hypothesized and documented continued to operate. For only one group was the trend the other way – the highest scoring public institutions that included three service academies. It seems possible, even likely, that the inclusion of these three academies is responsible for this anomaly.[33] A feature of the graph at least as significant as the time trend is the large variation across the groups. In 2008/09, for example, the average distance that students'

[30] Hoxby (1997, Table 3, p. 49).

[31] The sample contained 731 private and 390 public colleges. Hoxby (1994, Table 5, p. 52). [[note her tests of implications 3 and 4].

[32] For the purpose of calculating mean distance, midpoints of all closed categories were used and a value of 750 miles for the more than 500 class.

[33] Speculation about why; Yankovitch memo, etc.

colleges were from home varied from 177 miles for below-average public institutions (which were populated predominantly by in-state students) to 492 miles for the highest ranking private colleges. Distances for students attending private colleges tended to be greater than those attending comparably ranked public colleges (with the exception, again, of the anomalous 90+ public group). One notable implication of this graph is to note the long average distance traveled by students in the private HBCUs. In 2008/09, first-year students attending one of those HBCUs traveled some 400 miles to go to college, a distance considerably farther than for any of the groups of private colleges below the 90th percentile. It would appear the market for private HBCUs has as good a claim as any to be called "national."

Before moving to the second hypothesis, it is worth noting a set of findings that might link distance to other characteristics of students. A study by Griffith and Rothstein (2009) revealed that students who attended selective colleges had a proximity advantage over those who did not. Comparing students' homes to the *closest* selective college (not necessarily the college they attended), those who did attend a selective college lived closer to one than those who did not. Moreover, students living in the Northeast, where many of the established, elite colleges are located, tended to live closer to a selective college than students in other regions.[34] There was also an income bias to this proximity: for students in the highest income quartile, the closest selective college was 87 miles away, whereas for those in the bottom quartile, the closest one was 95 miles away.

Evidence relevant to the hypothesis's second implication – that differences between colleges in students' academic readiness will grow over time – is presented in the next pair of figures. The Freshman Survey asked students about their grades in high school. Figure 3.8a shows, by college group and year, the percentage who said their high school grades averaged A or A+. As one might expect, the college group with the highest average SAT in 1970 also enrolled students in 1972 with the highest high school grades, and on down the line, although this correspondence is not perfect. In successive years, two facts are evident. First, reflecting the apparent widespread grade inflation in high schools, the percentage of first year students who reported A or A+ averages went up across the board. Second, the correspondence to initial classification (by 1970-era average SAT) remained strong, though not monotonic. Colleges

[34] The average for those who lived in the Northeast was less than 19 miles, compared to averages of 95 miles in the South and Midwest and 149 miles in the West. Griffith and Rothstein (2009, p. 623).

whose students had high average SAT scores in 1970 continued to report higher shares of A or A+ students. To see more clearly whether disparities between colleges actually increased over time, Figure 3.8b presents the same data for high school grades, but as deviations from each year's average mean for all four-year college students.[35] This figure makes it clear that these disparities did increase, as the shares of students with reported A or A+ averages in high school increased for the groups of initially highly ranked private colleges, namely those in the top 10% of SAT scores in 1970. The only other trends of note are negative – private colleges in the 80-85th percentiles, public colleges in the 90th and above, and both groups of HBCUs. For the highest ranked private colleges, the jump in reported grades in 2008/09 is simply stunning.[36]

E. Beyond Scholastic Segregation

As highlighted by Hoxby, the process by which the market for college became increasingly a national one was fundamentally about how the customers over time re-sorted themselves to produce new patterns of attendance. Having lost their hold over top students living nearby, colleges were forced to compete for students across wider expanses of territory. The most selective could take good students from farther away, leaving lower-ranked colleges to compete for the remaining students, those with more modest qualifications.

One primary purpose of the current study is to examine whether this apparent scholastic segregation has been accompanied by segregation along other dimensions of student characteristics. And no dimension has greater policy significance than socioeconomic status. Whether developments in the market for college have resulted in more pronounced economic segregation is a consequential question to explore, for educational as well as social reasons. The rising economic rewards for college attainment, noted previously, have heightened the importance of access and diversity, traditional aims of U.S. postsecondary education policy.[37] The stakes are further raised because the characteristics of a student's peers matter in important ways as a component in the process of learning. There is a growing body of work showing that peer effects are a powerful force during the college years in influencing academic achievement,

[35] Weighted averages for each year were calculated using averages for each group, where each group's weight is its share of total four-year enrollment in the given year.

[36] [also will look at SATs and at variance within.] [third implication: resources and aptitude]
[A table on resources?] [[The market has, in her words, "re-sorted" students (p. 22).

[37] For two of the many studies motivated by concern over equity, see Stevens (2007) or Bailey and Dynarski (2011).

attitudes, and significant behaviors.[38] As a social mechanism, the composition of college student bodies is also important, for example, in the process of finding marriage partners.[39] Whether enrollment patterns are increasingly producing socially more homogeneous student bodies, as Hoxby's work implies for SAT scores at least, is a question of real significance, because the by-product of more homogeneous colleges is more separation between students who are different. Such stratification can easily aggravate disparities by income, social class, race, or other dimensions of difference. Because changes of this sort in enrollment patterns probably occur gradually over time, if at all, and would be expected to affect different kinds of colleges in different ways, it will be very useful to be able to observe changes over several decades, something that can be done using these survey data on first-year college students.

To look for evidence of increasing socioeconomic segregation, I turned to three measures available in the Freshman Survey: family income, parents' education, and private school attendance. First-year students were asked to estimate their parents' income (for the previous year) by choosing one of several categories, and these categorical responses were used to estimate a dollar value of income.[40] For all analysis, these figures are expressed in constant 2008 dollars. Although such estimates are likely to be inexact, there is no reason to believe that they are systematically biased so as to distort comparisons between large groups of students.[41]

Family income differs systematically with selectivity, as measured by 1970 average SAT, a correlation that is demonstrated in a scatterplot for the 17 college groups, shown in Figure 3.9. The figure shows points for the first and last survey waves, 1972 and 2008/09. [42] Although neither year's points rises without interruption, both plots show a 2strong positive correlation between average income and average SAT. As between the two sets of points, those for 2008/09 (shown by gray squares) appear to have a steeper slope. Driving this shift are particularly large

[38] See, for example, Winston (1999), Sacerdote (2001), and Kremer and Levy (2008).
[39] Among others, Murray (2012).
[40] For bounded income categories, a dollar value of income was based on their midpoints. For top categories, estimates of mean incomes was based on the actual mean of adjusted gross income from IRS *Statistics of Income* for the corresponding year.
[41] Note any evidence from HERI on accuracy of inc est. As an indication that these survey responses are strongly related to actual household income, the correlation between calculated family income (see below for details) and the median income of students' home ZIP codes, a noisy measure, owing to the large populations in many ZIP code areas, was … for 1989 and … for 2008.

Categorical responses were converted to dollar values by assigning the midpoint of all closed categories. To estimate the average income for the top category for each survey, IRS tabulations in the *Statistics of Income* were used to calculate the mean adjusted gross income for each of the five years covered by the surveys.
[42] The average SAT's are enrollment-weighted averages of the 1970-era college-wide averages for each of the 17 college groups described above.

jumps over the period in the average income of students attending the colleges with the highest SATs in 1970. Taken as a whole, the scatterplot suggests that, while family income continued to be positively correlated to college selectivity, income differences between the groups increased.

To see whether incomes have been diverging between students attending the various groups of colleges, Figure 3.10 shows how the average incomes for students in each college group differ from that year's mean income for all four-year colleges. The successive cohorts of students enjoyed generally rising family incomes, a telling fact by itself. In 2008 dollars, the enrollment-weighted average family income of students starting four-year colleges rose from roughly $100,000 in 1972 to $123,200 in 1989/90 to $145,600 in 2008/09. By group, students attending private colleges whose average SAT scores ranked at or above the 90th percentile in 1970 averaged the highest incomes for every year, and the increases for those colleges were also the highest. For the private colleges in the 98-99th percentiles, a group that includes institutions such as Middlebury, Princeton, and Wesleyan, average family income of first-year students exceeded the average for all first-year students by $64,100 in 1972, $82,700 in 1989/99, and $99,800 in 2008/09. In contrast, the incomes of students enrolling in public institutions in the bottom half of the selectivity ranking (examples, Oakland University and the University of South Carolina), private colleges in the bottom quarter (Iowa Wesleyan, Berry College), and the HBCUs all fell further behind during the last two decades of the period. The divergence of incomes was most striking among those attending HBCUs. By 2008/09, the first-year students in public HBCUs had family incomes averaging nearly $200,000 less than students entering the private colleges in the 98-99th percentile. Over the course of nearly four decades, the gap in students' average family income between those two groups of colleges increased from about $125,000 to $197,000. Between students attending public institutions in the bottom half of the SAT distribution (0-50th percentiles) and those attending the top-ranked private colleges (99+%) the gap in average family income increased from about $67,000 in 1972 to $104,000 in 2008/09. In terms of income, our first measure of socioeconomic status, therefore, the evidence certainly points to growing disparities over time.

A second measure for documenting possible disparities across colleges is parental education. Over the four decades covered by this study, the average educational attainment of students' parents increased markedly, making the college degree an increasingly common credential. For example, the share of first-year students whose fathers were college graduates

increased from 37% in 1972 to 58% in 2008/09. A more demanding marker of educational attainment looks to advanced degrees. For example, Figure 3.11 identifies students both of whose parents were college graduates and at least one of whom also had a graduate degree. As shown in Figure 3.11, this "power couple" circumstance was rather rare in 1972, applying to no more than a third of the couples sending children to college in any group, and closer to 10% in most groups. Between 1972 and 1989/90, this share increased across the board, with the biggest increases among students attending the 90th and above private colleges. The figure shows deviations from the yearly mean. By this measure, gaps between groups generally increased over the four decades, with the largest increases in the first two decades. By 1989/90, students attending private colleges in the four top-ranked groups were at least 25 percentage points more likely than average to have at least one parent with an advanced degree and the other at least a bachelor's. Mirroring the previous analysis using income, students enrolling in public HBCUs fell further behind over time.

It is worth noting that the picture of increasing gaps does not emerge from every measure, only for measures that signify high SES. For example, Figure 3.12 uses a measure of low educational attainment by parents. This is the percentage of students without a parent who had graduated from college. If successful in completing their studies, these students would be in their families' first generation to get a college degree. The figure compares the proportion of students, by group and year, in this situation. Here again, the rise in college attainment shows up in steady declines for every group over time, with the biggest declines between 1972 and 1989/90. By the end of the covered period, the gaps between the highest and lowest groups had declined. A similar shrinking of gaps is found if the measure is the percentage of students whose father is a college graduate.

In addition to family income and parents' education, a third measure of socioeconomic status is attendance at a private high school. This measure may be considered a rougher measure than the first two, for a couple of reasons. One is that many Catholic parochial schools have traditionally served families across the income spectrum, and those schools made up a sizable portion of private schools in 1972.[] Two, many affluent students attend public schools, only in wealthy school districts. Notwithstanding these considerations, it remains the fact that students attending private high schools tend on average to be more affluent than those who attend public

high schools.[43] The Freshman Survey contained questions in only two of the survey periods about what kind of high school they attended, the earliest and the latest. Figure 3.13 shows the group averages for these two years. The comparisons reveal striking increases in the three groups of private colleges above the 95th percentile of 1970 scores. There were modest increases in several other groups, but nothing large.[44]

In sum, the evidence presented here suggests that, not only did the degree of scholastic segregation increase over this period, so did socioeconomic segregation. To be more precise, the data suggest that those at the top of the SES distribution increasingly separated themselves from those below. Each of the measures utilized – family income, parental education, and private school enrollment – provides support for this conclusion. This apparent SES separation proceeded at the same time that colleges were becoming more diverse in their racial and ethnic makeup. To see how these two seemingly contradictory trends could coexist, consider Figures 3.14 and 3.15, which focus on measures of SES of black students. Figure 3.14 shows that the average income for entering nonwhite students increased across the board from 1972 to 1989/90 and again in most groups over the next two decades. Notice, however, that the increases were largest in private colleges, especially those in highest selectivity groups. In the four decades covered by the sample, the average family incomes of nonwhite students entering colleges increased by 50% or more in every private college group above 85%, and a stunning 114% in the 95-98th percentile group. The average income of nonwhite students also increased by roughly 50% in public institutions at the 50-80th percentile.

Another clue in the diversity-SES interaction can be seen in the proportion of black first-year students who had attended private high schools. As Figure 3.15 shows, that percentage jumped markedly in several college groups over the four-decade period. By 2008/09 more than 30% of black first-year students entering private colleges in the top three SAT categories had attended a private high school. For these students of color, racial integration accompanied socioeconomic segregation, an experience described in Shamus Khan's account of minority

[43] Using household data for California, Buddin, Cordes and Kirby (1998, Table 4, p. 119) show that the percentage of students enrolled in private schools rose with income, from 3.9% in the lowest income class to 17.4% in the highest. See also Long and Toma (1988) and Lankford and Wyckoff (1992) for evidence that private school enrollment is positively related to income.

[44] The decline in the share of students who had attended private schools was particularly steep for private colleges in the 60-70th percentile of SATs. Of the 12 colleges in this group, four are Roman Catholic, suggesting that a good portion of the 1972 private school graduates could have attended Catholic schools, those whose enrollments fell the most.

students at a prestigious private school, *Privilege: The Making of an Adolescent Elite at St. Paul's School* (2011). Thus socioeconomic separation could occur even as racial and ethnic integration proceeded apace.

F. Segregation by Effort?

Although the major focus of the current paper is on scholastic and socioeconomic segregation in higher education, it is fitting to note another dimension to which I plan to devote some attention. My larger aim in the project is to explore in what ways four-year colleges have become differentiated. I therefore offer a brief preview of planned future work.

Among the questions posed to the first-year students in the Freshman Survey were a series that asked about how they spent their time during their senior year in high school. These time-use questions appeared in only the last two waves, 1989/90 and 2008/09, so comparisons are possible for only the last two-decade period. One question asked about time spent studying and doing homework.[45] The results, shown in Figure 3.16, are striking, because the students entering colleges in all the groups except three revealed the same trend – a reduction in average hours spent. In the two decades between the two surveys, a host of new ways to spend time had come into being, including pagers, cell phones, smart phones, computers, instant messaging, and Facebook. On average, the number of hours devoted to homework and studying declined from 5.9 to 5.2. Still, the students entering colleges in three groups did buck this trend – these are the groups of colleges whose SAT scores were highest in 1970. Among the host of features that distinguished these selective colleges – grades, affluence, and private high schools – another must be added: studying.

G. A Peek at the Supply Side: Did the Rich (Colleges) Get Richer?

To this point, the focus has been on the demand side – how broad economic trends, particularly the rise in income inequality, have shown up in patterns of enrollment in four-year colleges. As noted in section A, one way in which changes in the income distribution might affect colleges is by way of charitable donations. Given the strong empirical connection between

[45] The general question was, "During your last year in high school, how much time did you spend during a typical week doing the following activities?" For all the activities, including "studying/homework," eight categorical answers were possible, from None to Over 20 hours. To calculate the mean, each student was assigned the midpoint of the category answered. The top category was assigned 20 hours.

personal income and contributions, and the documented preferences that affluent donors have shown toward colleges and universities, it is reasonable to suppose that the rising fortunes of those at the top of the income distribution would spell rising donations to colleges. A study of donations of $5 million or more in 1996 showed that over half of the total $1.5 billion went to universities, not counting university medical centers (Auten, Clotfelter, and Schmalbeck 2000, Table 2). With impressive regularity, prominent American research universities have announced, and then met or exceeded, increasingly ambitious capital campaigns. Since 2012, university fundraising campaigns have raised, for example, $3.9 billion for Yale, more than $3 billion for Cornell, more than $4 billion for Columbia, and a record $6.2 billion for Stanford. In September 2013 Harvard announced a goal of $6.5 billion for its upcoming campaign.[46] Reflecting on that university's already huge endowment, one commentator complained that the rich in higher education were becoming *too* rich:

> Harvard's timing is impeccable. The wealthiest Americans have recovered all the money they lost during the Great Recession and then some, while legions of potentates and businessmen worldwide are eager to buy a piece of the elite American dream for their kids. Over the last decade, private universities have separated from their public competitors, ramping up spending and poaching faculty members and students. Now they can run up the score.[47]

At issue, then is whether the changes in the income distribution have boosted contributions to higher education and, if so, how these contributions have been distributed. Have contributions such as these, to the best-endowed universities in the country, contributed to increasing inequality in private support for higher education?

To address these two questions, I analyzed data on contributions from annual surveys carried out by the Council for Aid to Education of voluntary gifts and grants received by colleges and universities over the period 1969 to 2011. Contributions covered in the surveys were donations from six sources: foundations, alumni, other individuals, corporations, and religious and other organizations. To examine patterns across colleges and how they changed over time, data for 167 colleges which reported contributions data over the period were divided into 17

[46] Emma Rolley, "Stanford Campaign Brings in $6.2-Billion, a Record for Higher Education," *Chronicle of Higher* Education, February 8, 2012; Tamar Lewin, "Report Says Stanford is First University to Raise $1 Billion in a Single Year," *New York Times*, February 20, 2013; David Abel, "Harvard Looks to Raise $6.5 B by 2018," *Boston Globe*, September 21, 2013.
[47] Kevin Carey, "How Taxpayers Are Helping to Finance Harvard's Capital Campaign," *Chronicle of Higher Education*, September 24, 2013.

groups using the same criteria as the sample of 188 colleges used for analyzing the Freshman Survey data. Although they were grouped using the same criteria as the sample of 188 colleges used for analyzing the Freshman Survey data, these 167 are not the same or a subset of the larger group of colleges. Figure 3.17 [C-15] displays the average levels of donations received by these colleges. The figure reveals yawning disparities in contributions. In 1971-73, for example, the private colleges in the highest SAT category received an average of $143 million per year (expressed in 2011 dollars), a number that dwarfed all but three other groups, all of them private institutions in the top SAT brackets. Between that earliest time and 1988-90, nearly every group of colleges experienced increases in donations, with the public institutions enjoying the largest percentage increases. But over the following two decades, the growth in donations was remarkable, especially for the high-SAT private colleges. Beginning at already high levels in 1988-90, donations to these top private colleges and universities rose dramatically. In percentage terms, donations to these top private colleges grew at percentage rates comparable to those for public universities and several of the groups of private colleges. But in absolute terms, they were able to increase their advantage over all other groups of colleges.

H. A Meritocracy Paradox

The road to meritocracy has been a bumpy one for America's colleges. At least it has been a circuitous one. Over the four decades beginning around 1970, the market for college became less local and regional in scope, and more national. As this transition was occurring, the racial discrimination of the past, once enforced by state governments in the South and Border states and, to a lesser extent by tradition elsewhere, was for the most part buried by 1970.[48] The widening geographical expanse of the market was accomplished by scholastic segregation – the increase in stratification by academic aptitude. These developments appear to be strong evidence to support the notion that the market for college has become more meritocratic, with enrollment patterns reflecting objectively measured aptitude or other yardsticks of deservedness rather than characteristics unrelated to intellectual or personal merit.

What makes the road bumpy, and this story of growing meritocracy more complicated, is that the rise in scholastic segregation was accompanied by a parallel rise in economic

[48] Some overt discrimination remained, chiefly in the form of preferences for children of alumni, discussed below.

segregation, or stratification. Based on several different measures of socioeconomic status, data on successive waves of first-year students suggest that economic distinctions between colleges grew over this period. The colleges at the very top of the SAT/selectivity pecking order at the beginning of the period – particularly the private institutions – attracted students whose parents and schooling were, in comparison to other students in their age cohorts, increasingly affluent. This finding is consistent with other research suggesting that other economic gaps in education have been growing, but it is worth stressing that the economic gaps identified here are wholly within the four-year college market. That is, these gaps are in addition to economic gaps in the margins between those who enroll or not in any postsecondary training, or between two-year and four-year college.

To answer why an increasing emphasis on objective criteria might result in a rise in economic stratification, one is naturally drawn to certain advantages possessed by affluent families. As hinted at above, a host of advantages are available to those with resources.

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Figure 3.1 [C-2]

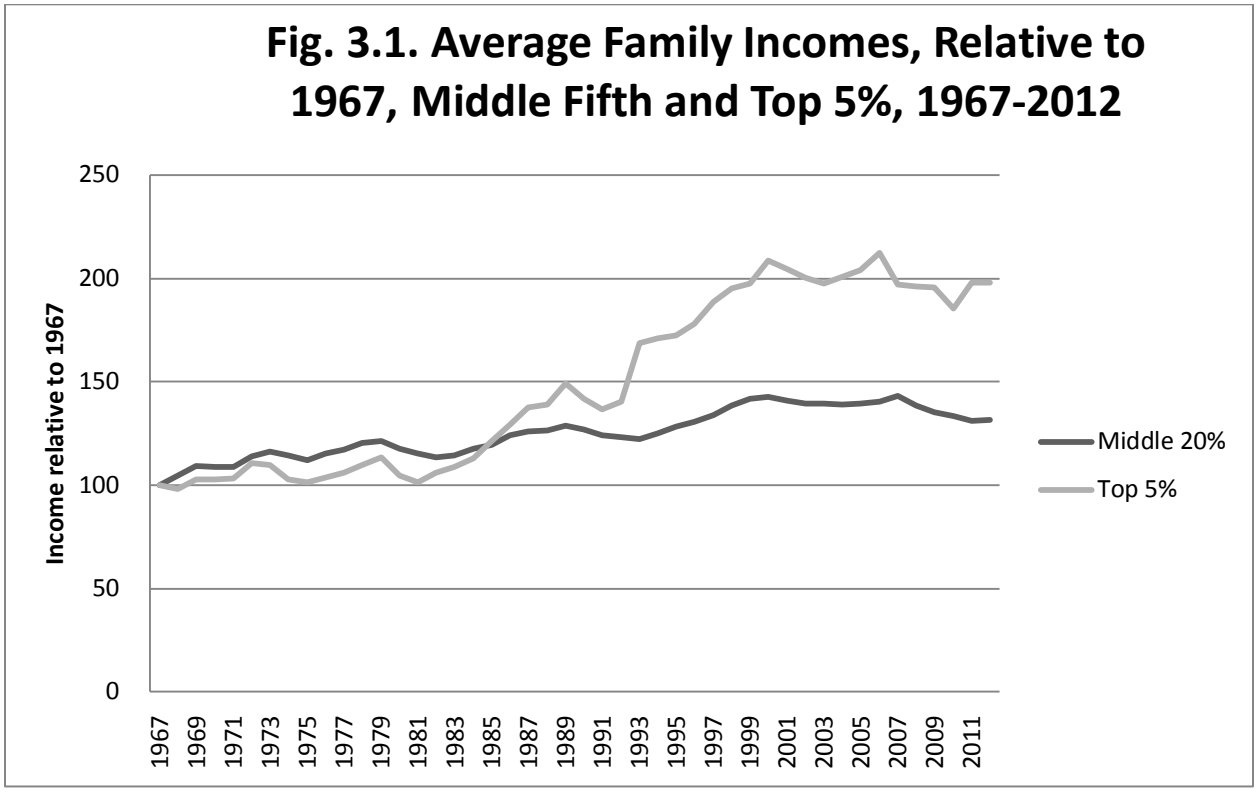
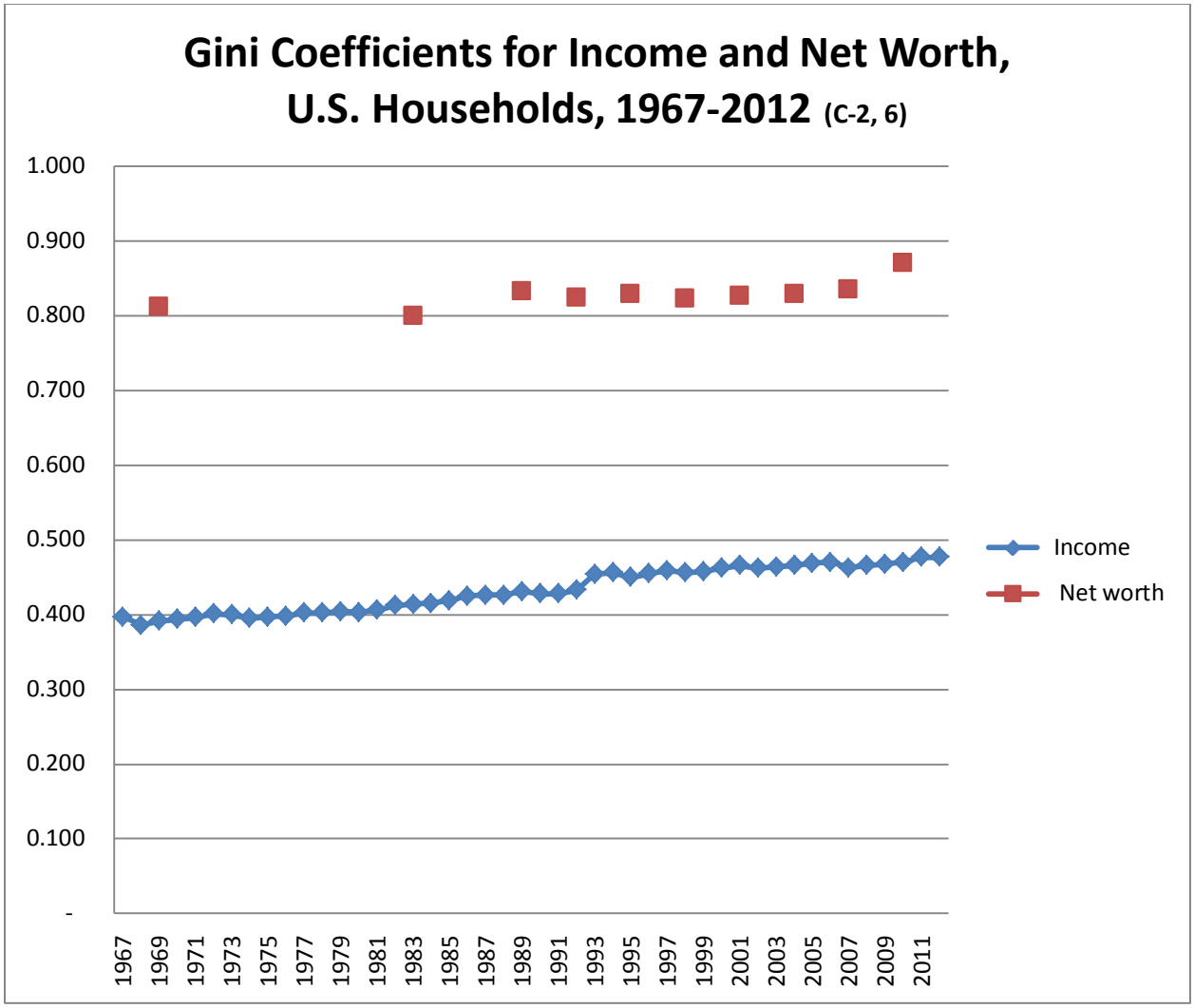


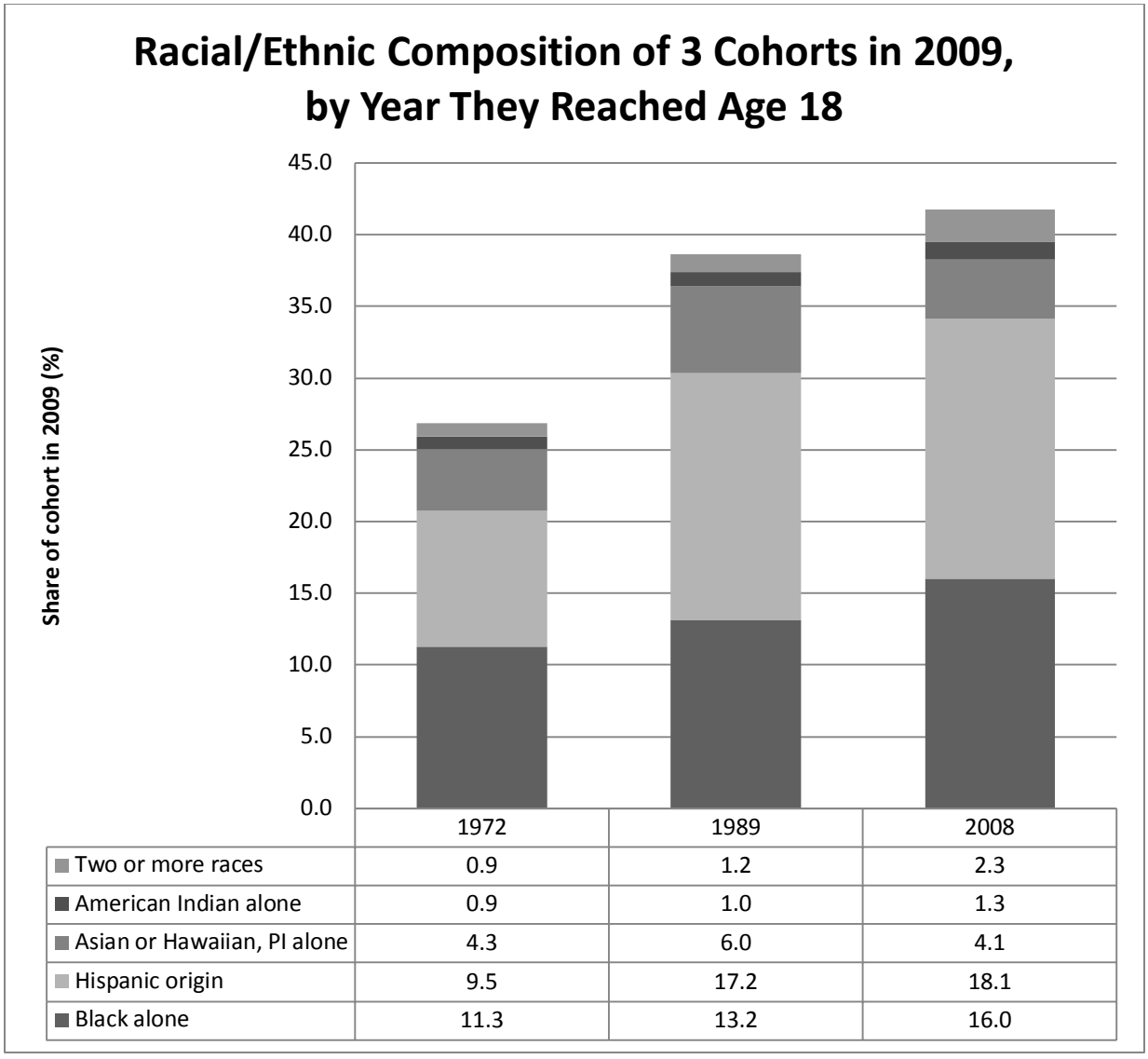
Fig. 3.1. Average Family Incomes, Relative to 1967, Middle Fifth and Top 5%, 1967-2012
Income relative to 1967
250
200
150
100
50
0
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
Middle 20%
Top 5%

Figure 3.2 [C-6]



Sources: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements, http://www.census.gov/hhes/www/income/data/historical/inequality/index.html, 2/11/14; Wolff, Edward N., "The Asset Price Meltdown and the Wealth of the Middle Class," NBER WP 18559, November 2012, Table 2.

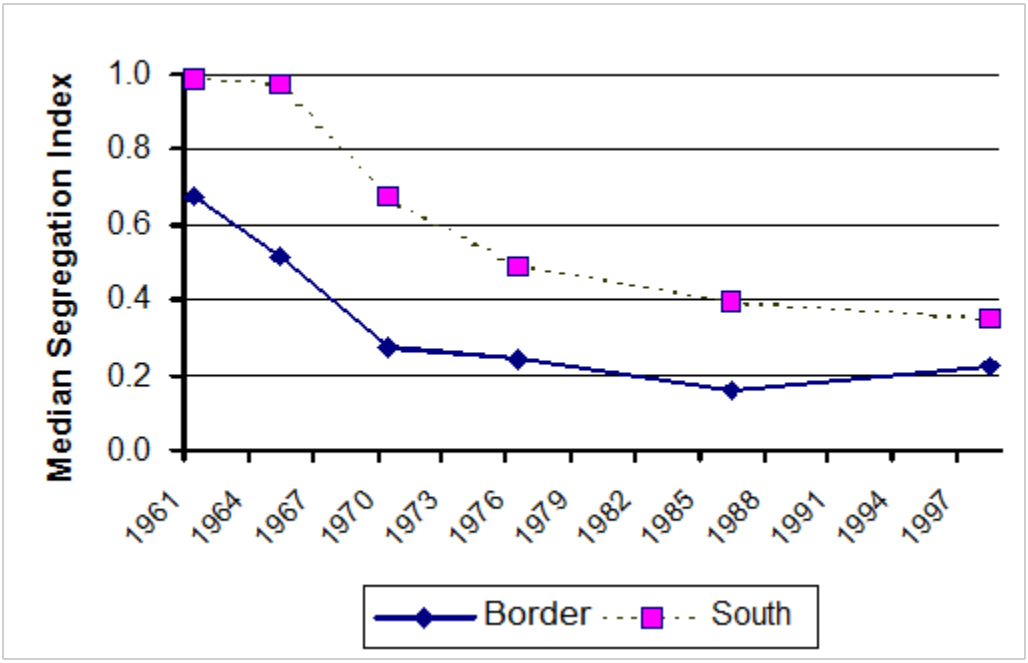
Figure 3.3 [C-10]



	1972	1989	2008
Two or more races	0.9	1.2	2.3
American Indian alone	0.9	1.0	1.3
Asian or Hawaiian, PI alone	4.3	6.0	4.1
Hispanic origin	9.5	17.2	18.1
Black alone	11.3	13.2	16.0

Source: *Statistical Abstract of the United States: 2012-13,*Table 11, pp. 14-15. Hispanic origin is considered an ethnicity, not a race. Components may sum to more than 100 because nonwhite Hispanic origin is counted twice.

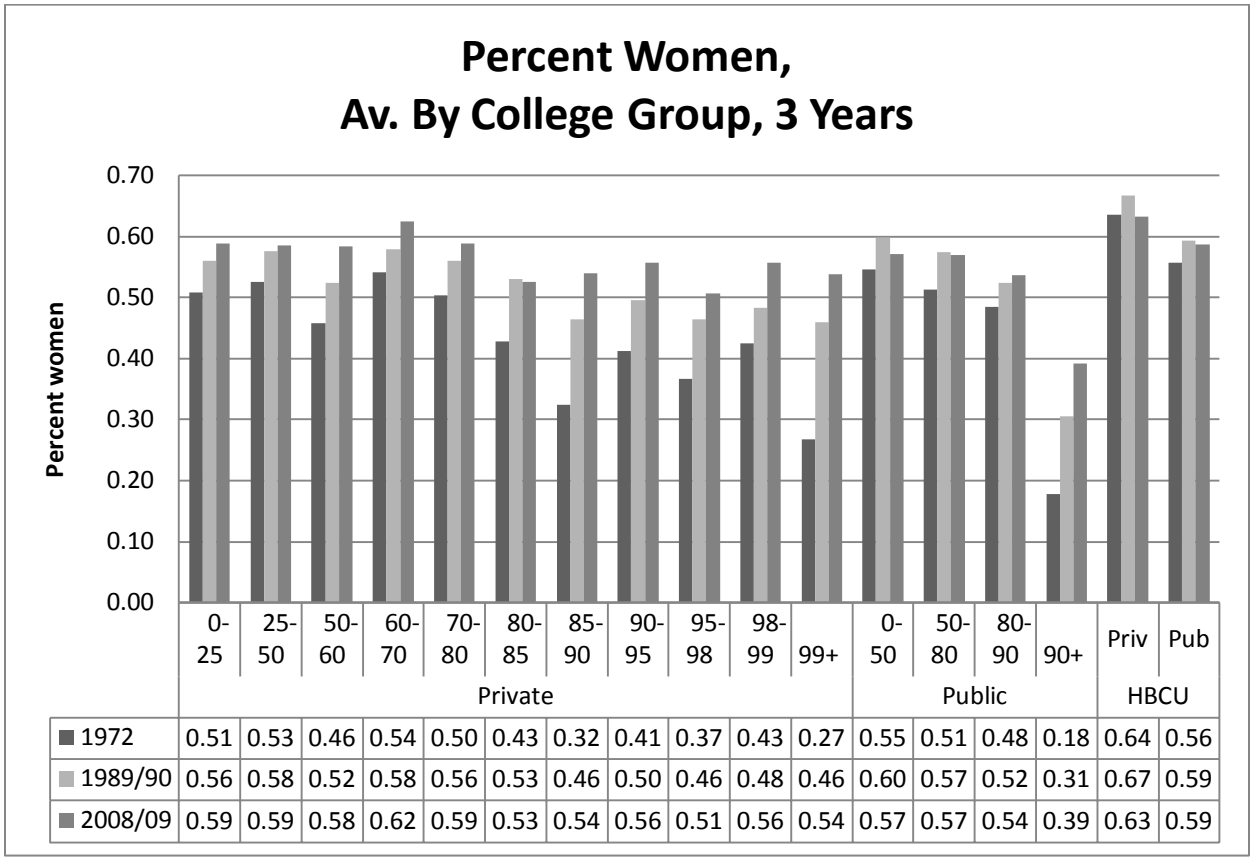
Figure 3.4. In-State Racial Segregation in Colleges and Universities, Median for South and Border States, 1961-1998.



Source: Figures are gap-based segregation index between white and nonwhite students, public four-year colleges and universities. Clotfelter (2004, Table A6.1, p. 175).

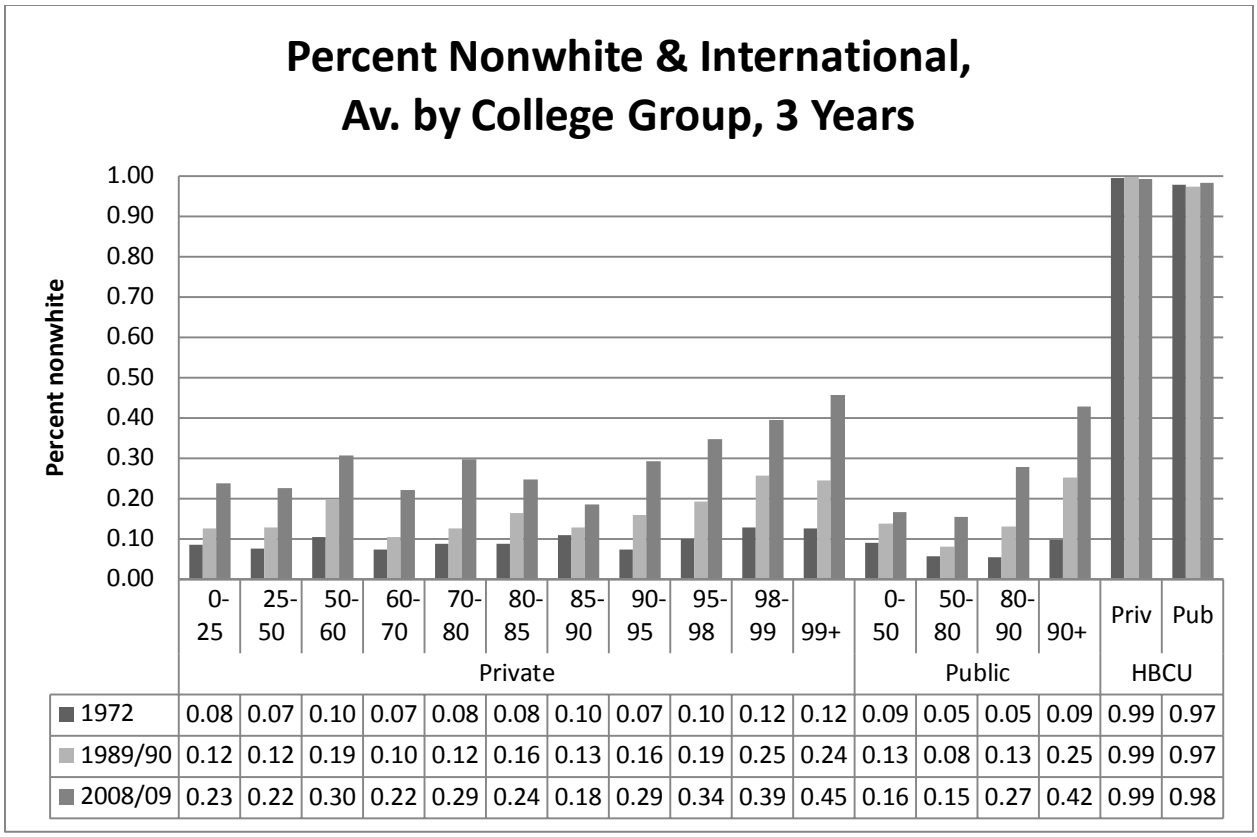
Note: numbers for 1961, 76 and 98 are South: .986, .782, .352; border: .674, .328, .220

Figure 3.5 [C-5]



	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
1972	0.51	0.53	0.46	0.54	0.50	0.43	0.32	0.41	0.37	0.43	0.27	0.55	0.51	0.48	0.18	0.64	0.56
1989/90	0.56	0.58	0.52	0.58	0.56	0.53	0.46	0.50	0.46	0.48	0.46	0.60	0.57	0.52	0.31	0.67	0.59
2008/09	0.59	0.59	0.58	0.62	0.59	0.53	0.54	0.56	0.51	0.56	0.54	0.57	0.57	0.54	0.39	0.63	0.59

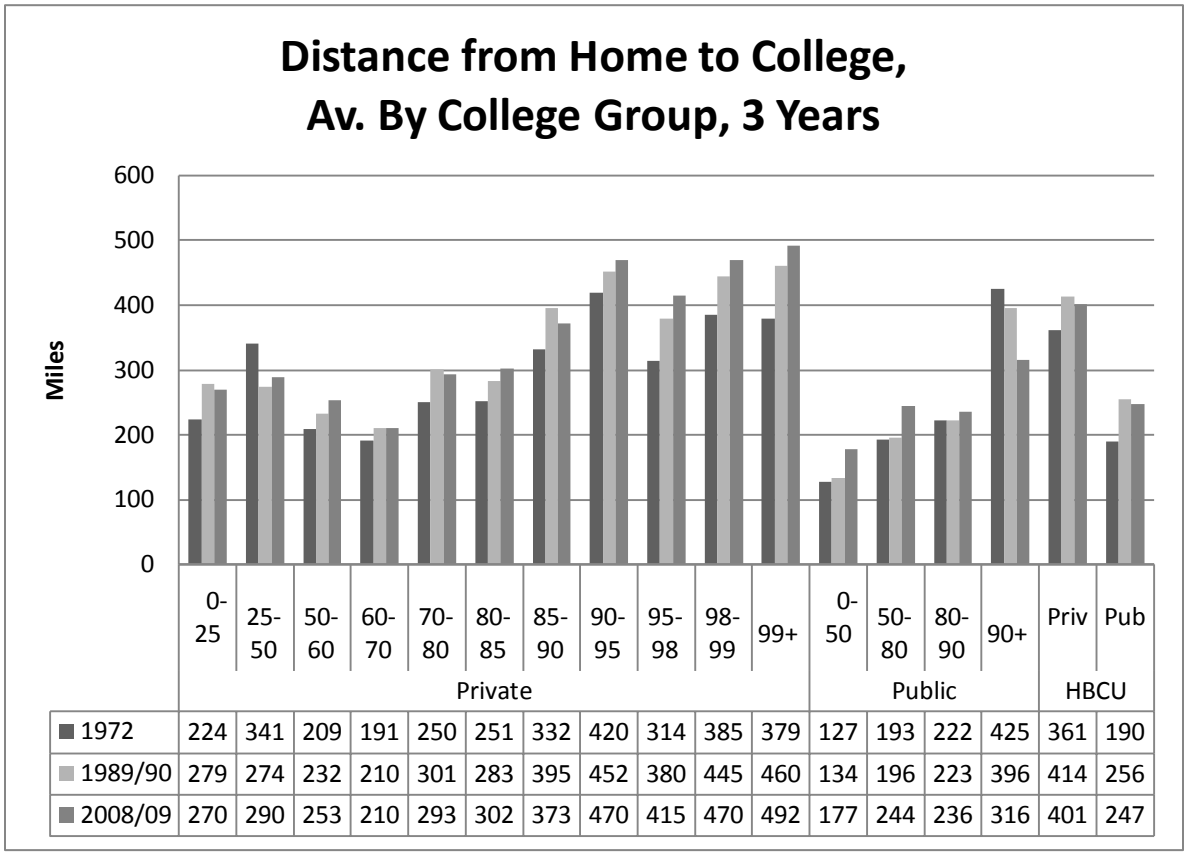
Figure 3.6 Percent of Students Nonwhite and International



	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
1972	0.08	0.07	0.10	0.07	0.08	0.08	0.10	0.07	0.10	0.12	0.12	0.09	0.05	0.05	0.09	0.99	0.97
1989/90	0.12	0.12	0.19	0.10	0.12	0.16	0.13	0.16	0.19	0.25	0.24	0.13	0.08	0.13	0.25	0.99	0.97
2008/09	0.23	0.22	0.30	0.22	0.29	0.24	0.18	0.29	0.34	0.39	0.45	0.16	0.15	0.27	0.42	0.99	0.98

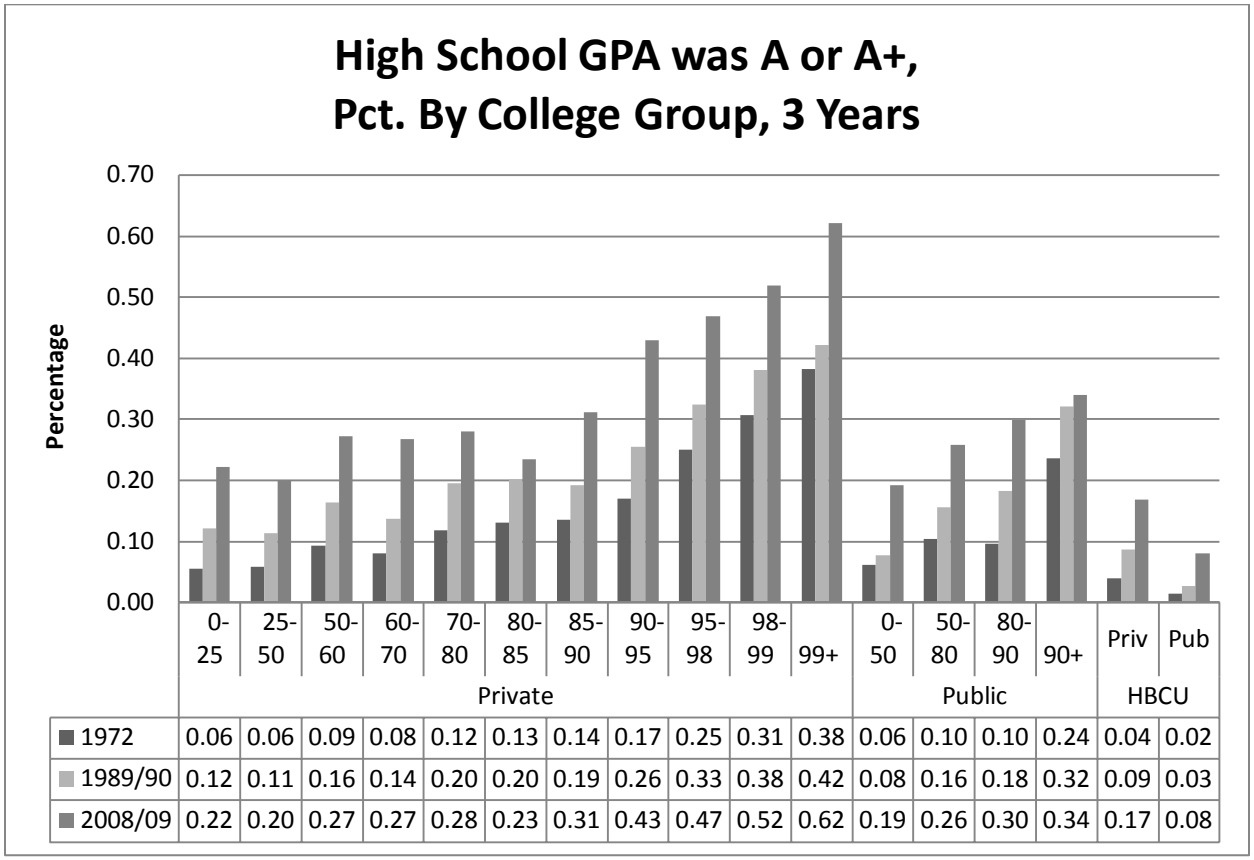
Note: Bars show the percentage of first-year students are not white citizens or permanent residents.

Figure 3.7



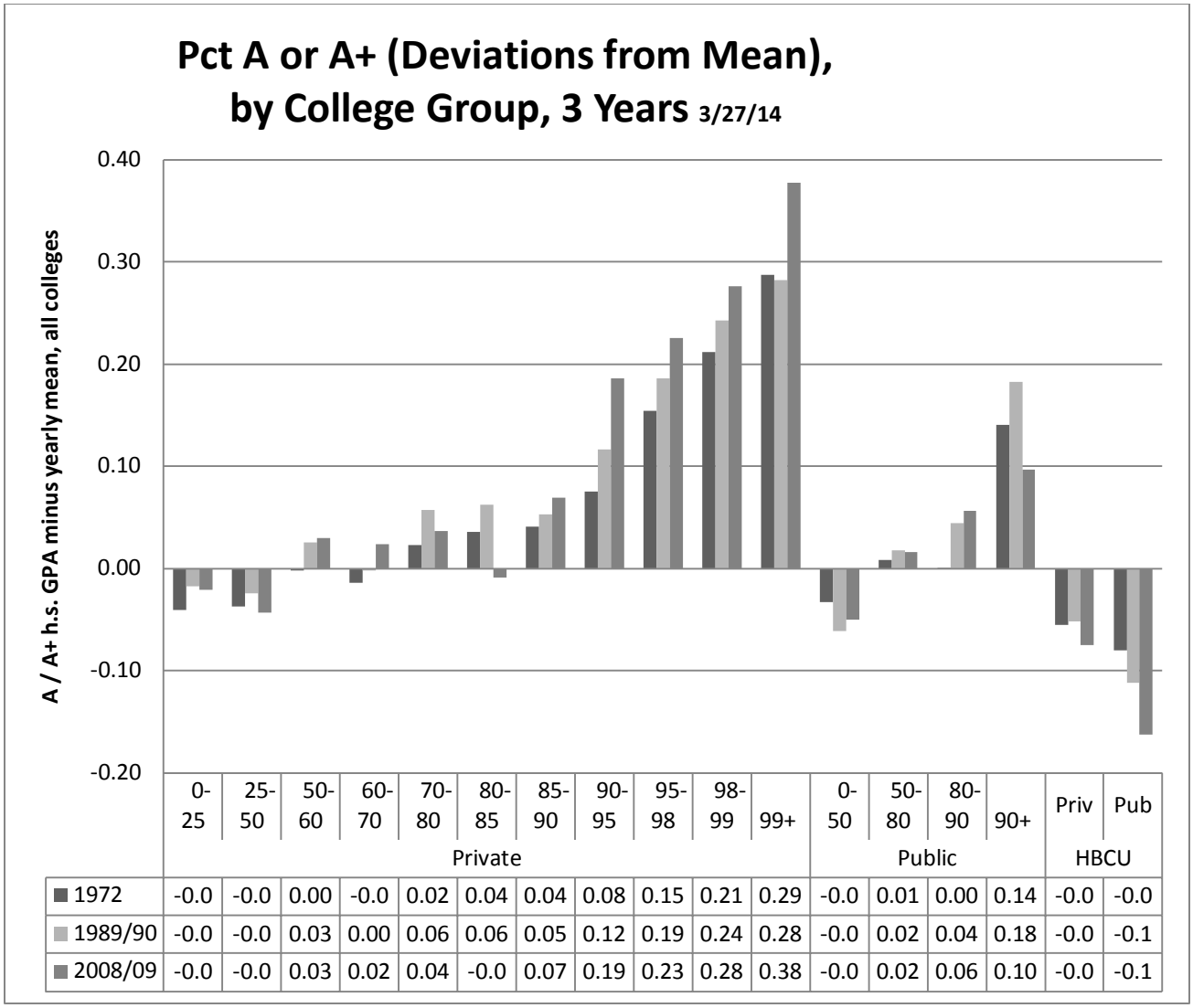
	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
1972	224	341	209	191	250	251	332	420	314	385	379	127	193	222	425	361	190
1989/90	279	274	232	210	301	283	395	452	380	445	460	134	196	223	396	414	256
2008/09	270	290	253	210	293	302	373	470	415	470	492	177	244	236	316	401	247

Figure 3.8a



	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
1972	0.06	0.06	0.09	0.08	0.12	0.13	0.14	0.17	0.25	0.31	0.38	0.06	0.10	0.10	0.24	0.04	0.02
1989/90	0.12	0.11	0.16	0.14	0.20	0.20	0.19	0.26	0.33	0.38	0.42	0.08	0.16	0.18	0.32	0.09	0.03
2008/09	0.22	0.20	0.27	0.27	0.28	0.23	0.31	0.43	0.47	0.52	0.62	0.19	0.26	0.30	0.34	0.17	0.08

Figure 3.8b



	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
1972	-0.0	-0.0	0.00	-0.0	0.02	0.04	0.04	0.08	0.15	0.21	0.29	-0.0	0.01	0.00	0.14	-0.0	-0.0
1989/90	-0.0	-0.0	0.03	0.00	0.06	0.06	0.05	0.12	0.19	0.24	0.28	-0.0	0.02	0.04	0.18	-0.0	-0.1
2008/09	-0.0	-0.0	0.03	0.02	0.04	-0.0	0.07	0.19	0.23	0.28	0.38	-0.0	0.02	0.06	0.10	-0.0	-0.1

Figure 3.9

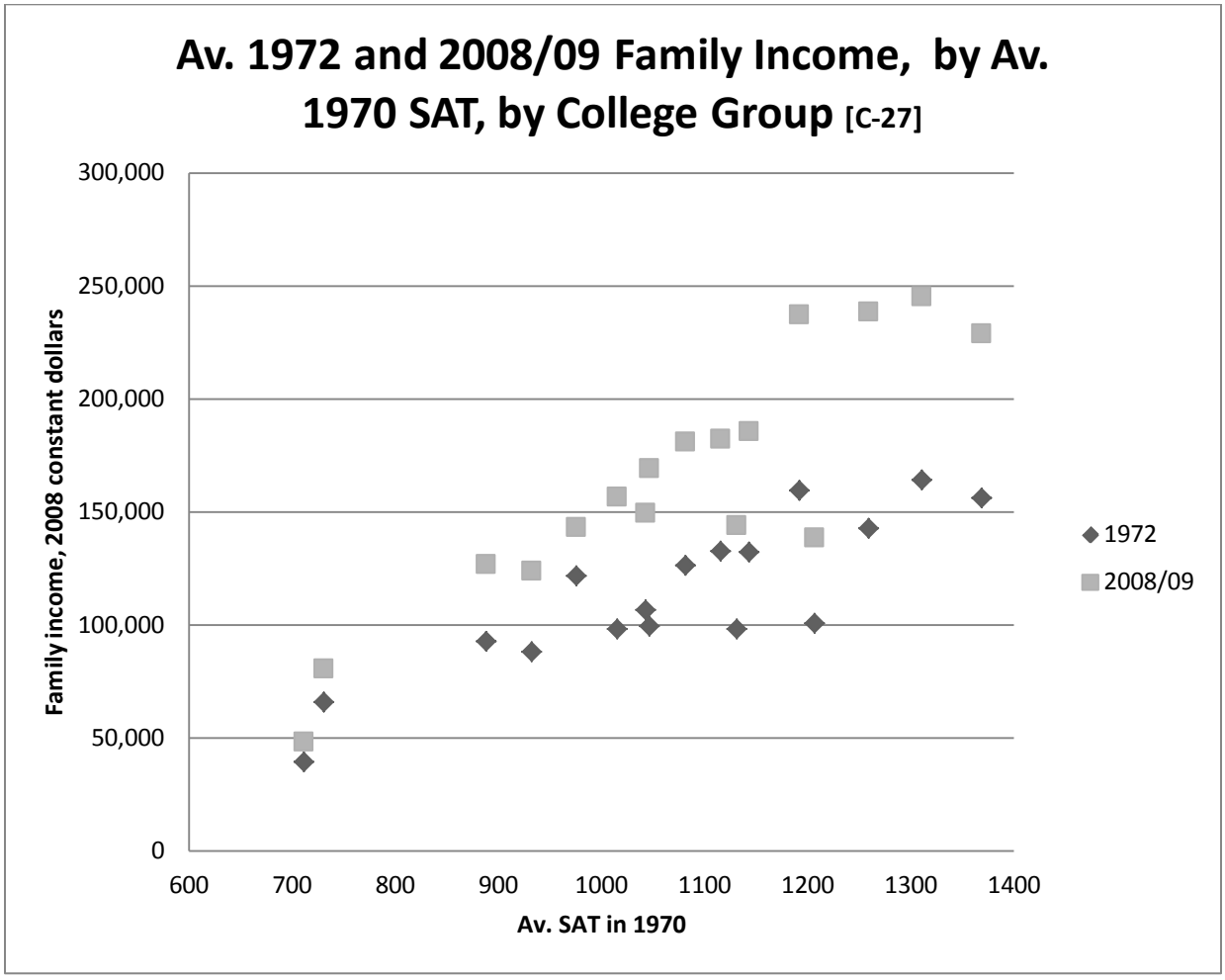
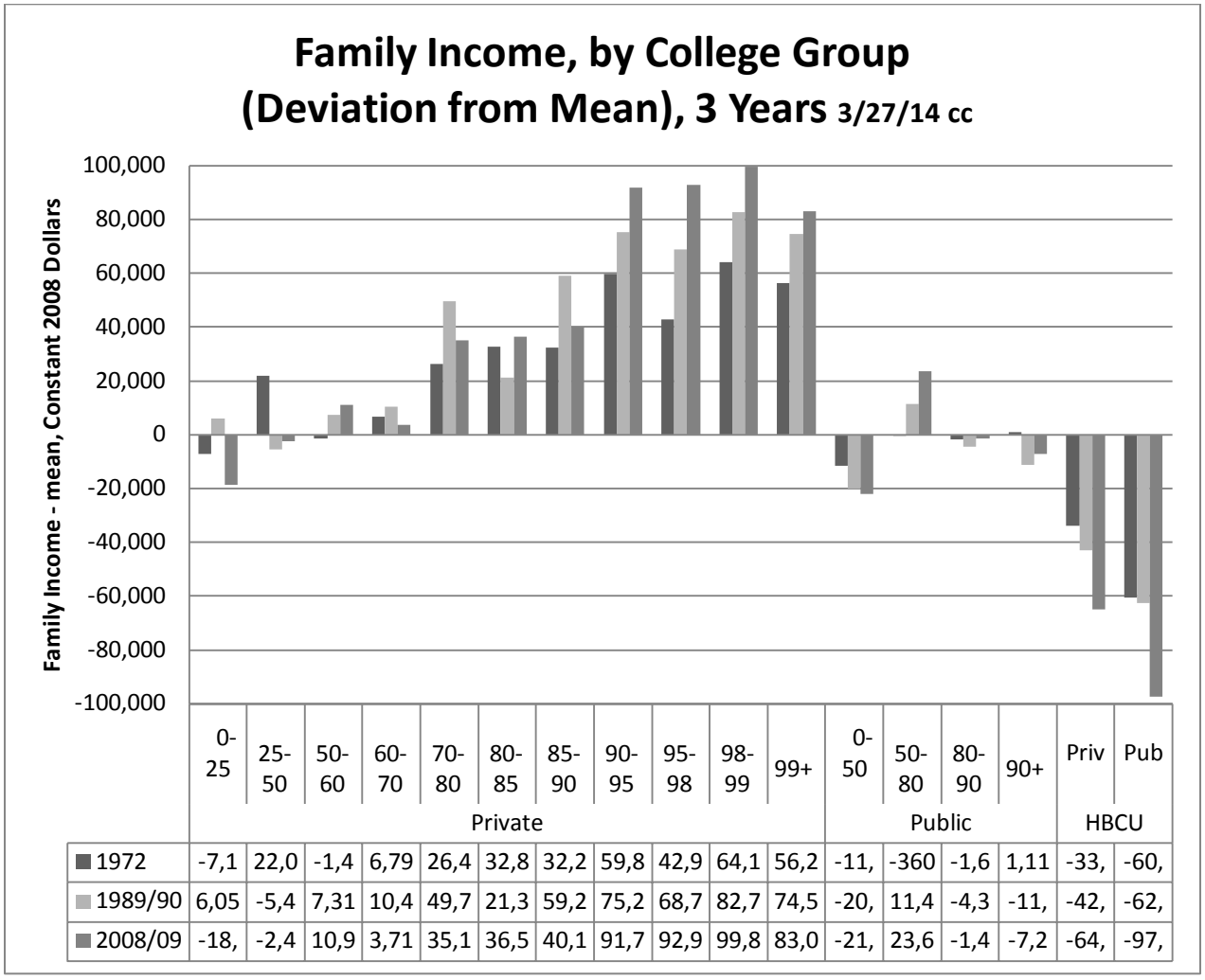

Av. 1972 and 2008/09 Family Income, by Av. 1970 SAT, by College Group [C-27]
Family income, 2008 constant dollars
300,000
250,000
200,000
150,000
100,000
50,000
0
600
700
800
900
1000
1100
1200
1300
1400
Av. SAT in 1970
1972
2008/09

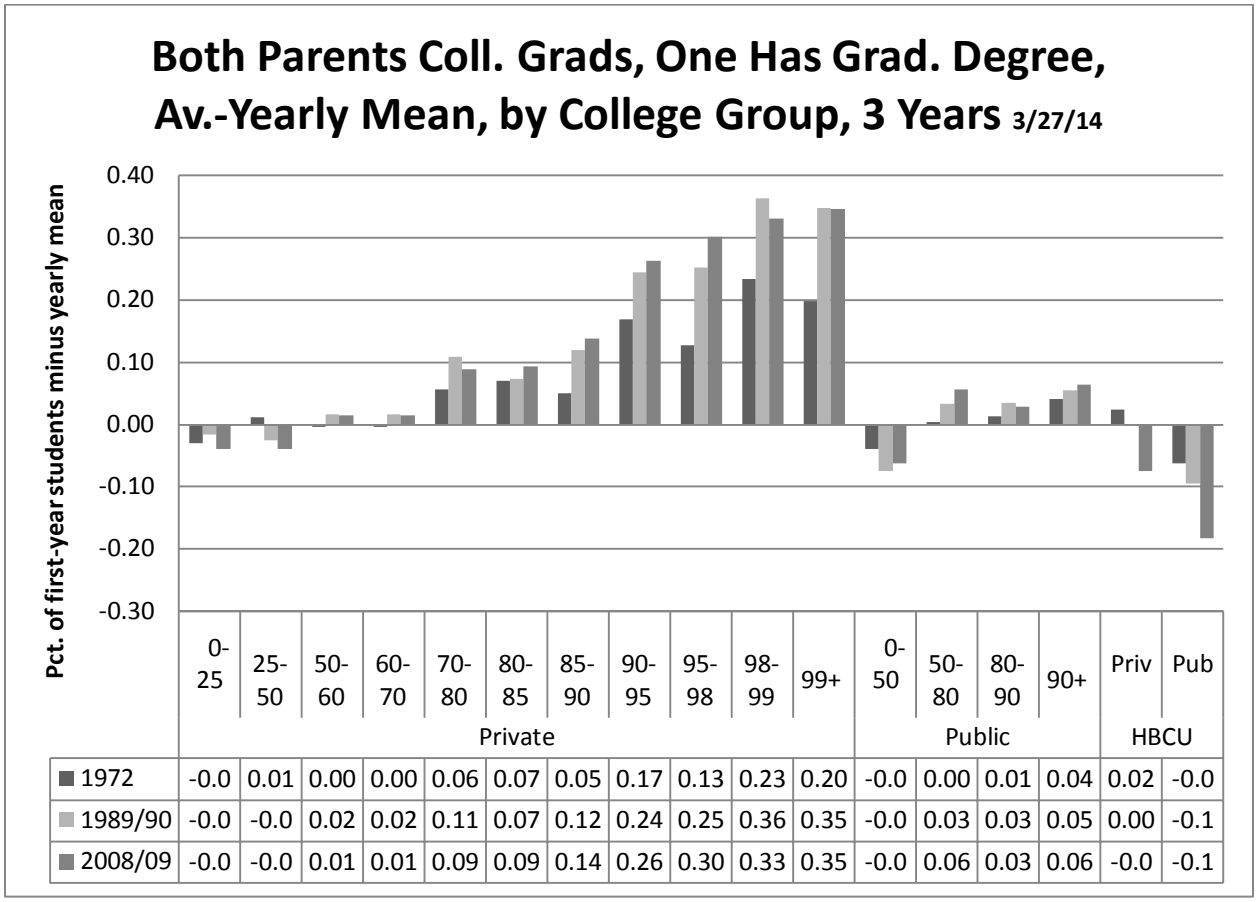
Figure 3.10



	Private											Public				HBCU	
	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
1972	-7,1	22,0	-1,4	6,79	26,4	32,8	32,2	59,8	42,9	64,1	56,2	-11,	-360	-1,6	1,11	-33,	-60,
1989/90	6,05	-5,4	7,31	10,4	49,7	21,3	59,2	75,2	68,7	82,7	74,5	-20,	11,4	-4,3	-11,	-42,	-62,
2008/09	-18,	-2,4	10,9	3,71	35,1	36,5	40,1	91,7	92,9	99,8	83,0	-21,	23,6	-1,4	-7,2	-64,	-97,

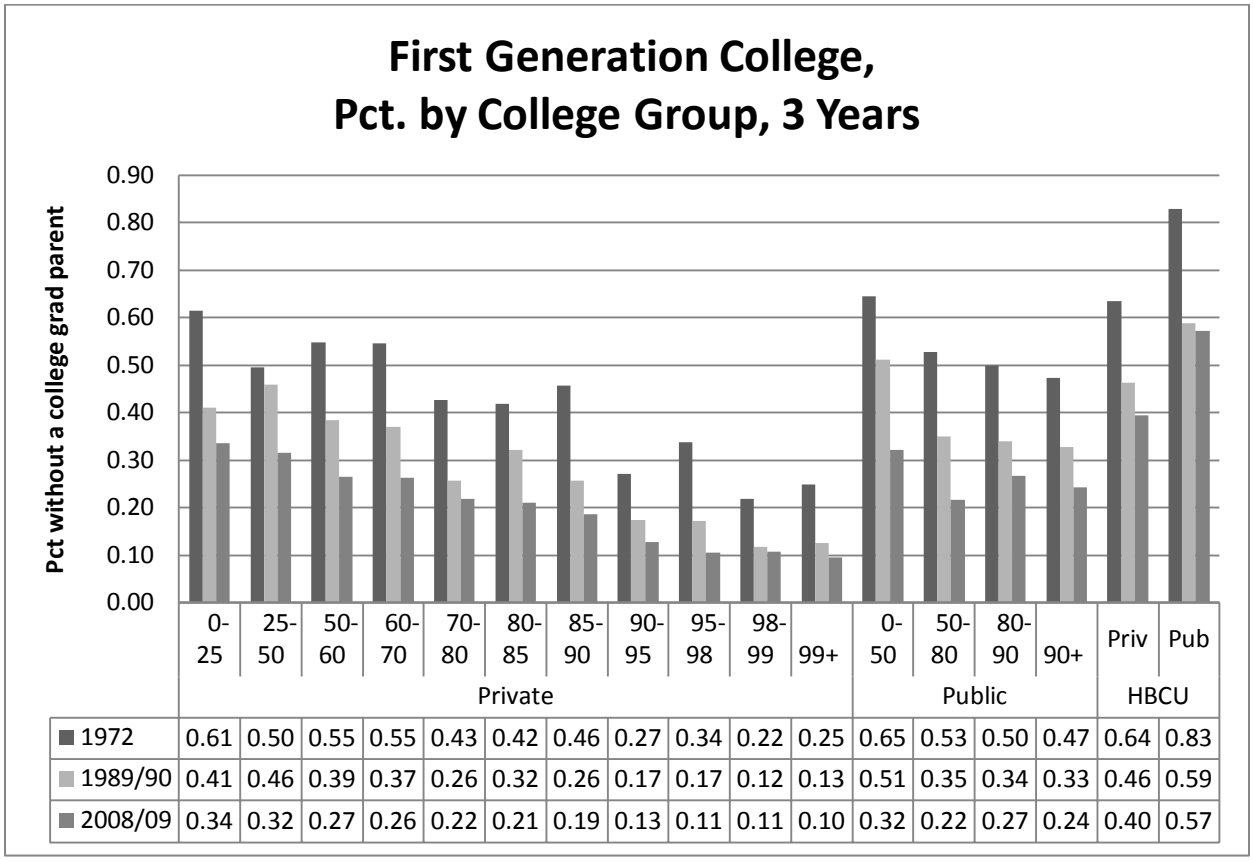
Note: To calculate average income by group and year, income for each respondent was estimated to be the midpoint of bounded categories. For the top income category, the estimate was average Adjusted Gross Income (AGI) for taxpayers above that level, calculated by year from the I.R.S. *Statistics of Income* reports. In current dollars, these values were: $88,393 for the $50,000 or more category in 1971; $321,103 for $150,000 or more in 1988; $303,469 for $150,000 or more in 1989; $677,804 for $250,000 or more in 2007; and $604,930 for $250,000 or more in 2008). (C-5, C-28).

Figure 3.11



	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
1972	-0.0	0.01	0.00	0.00	0.06	0.07	0.05	0.17	0.13	0.23	0.20	-0.0	0.00	0.01	0.04	0.02	-0.0
1989/90	-0.0	-0.0	0.02	0.02	0.11	0.07	0.12	0.24	0.25	0.36	0.35	-0.0	0.03	0.03	0.05	0.00	-0.1
2008/09	-0.0	-0.0	0.01	0.01	0.09	0.09	0.14	0.26	0.30	0.33	0.35	-0.0	0.06	0.03	0.06	-0.0	-0.1

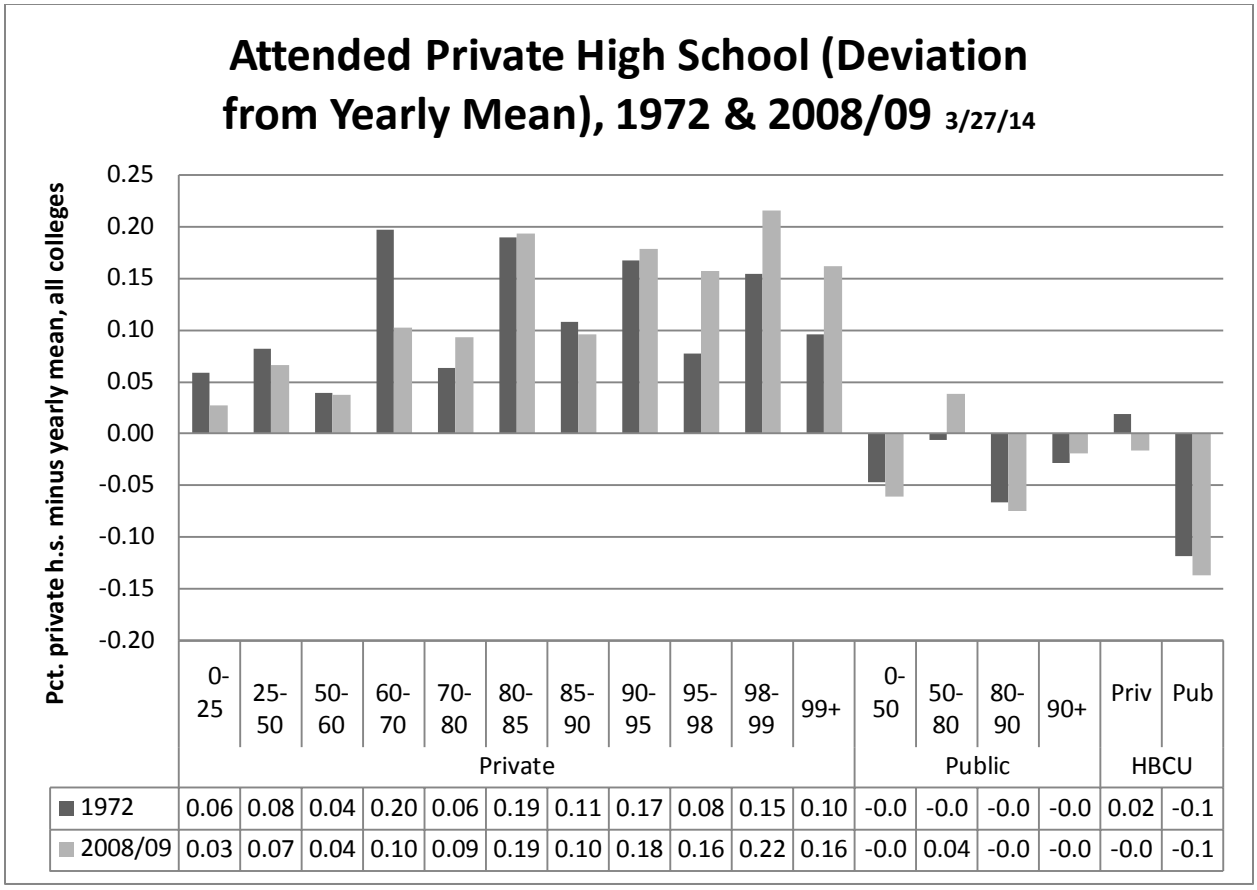
Figure 3.12



	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
1972	0.61	0.50	0.55	0.55	0.43	0.42	0.46	0.27	0.34	0.22	0.25	0.65	0.53	0.50	0.47	0.64	0.83
1989/90	0.41	0.46	0.39	0.37	0.26	0.32	0.26	0.17	0.17	0.12	0.13	0.51	0.35	0.34	0.33	0.46	0.59
2008/09	0.34	0.32	0.27	0.26	0.22	0.21	0.19	0.13	0.11	0.11	0.10	0.32	0.22	0.27	0.24	0.40	0.57

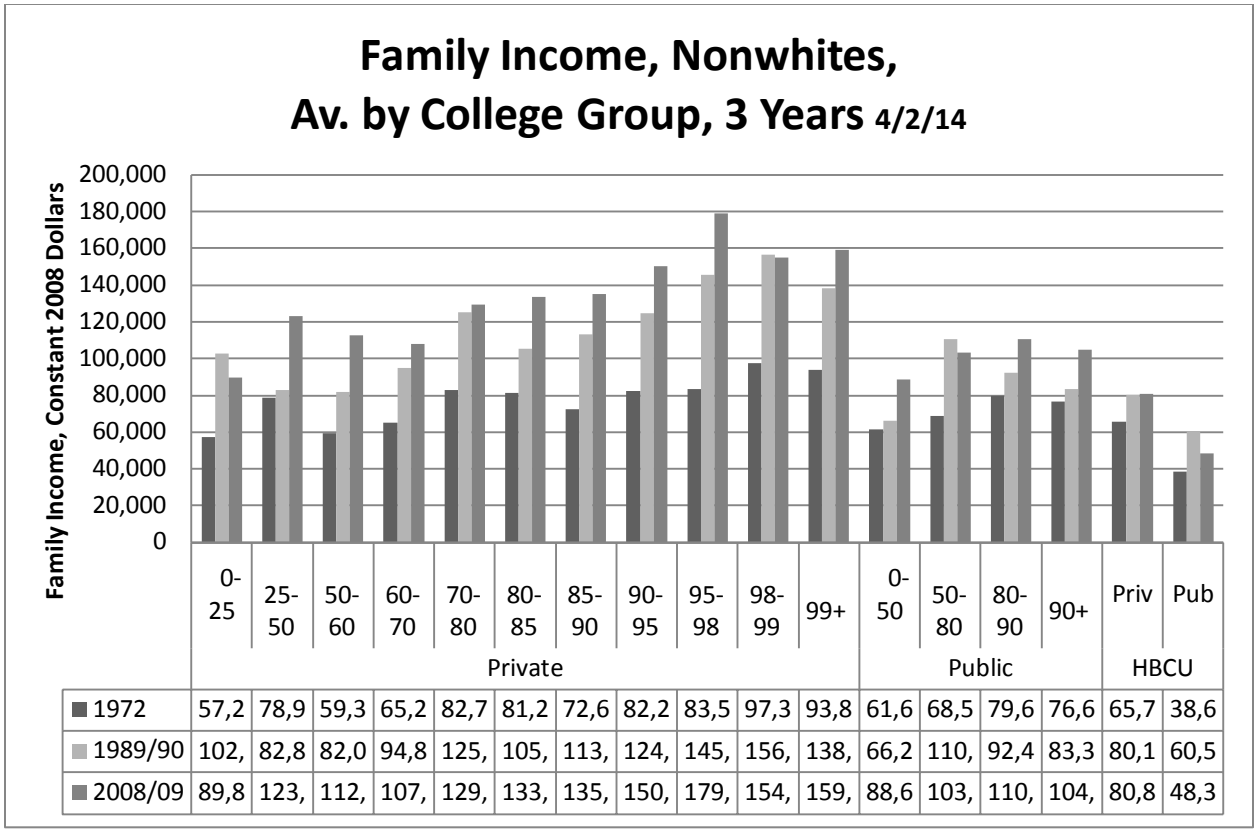
Note: Bars show the percentage of first-year students by group and year neither of whose parents completed college.

Figure 3.13



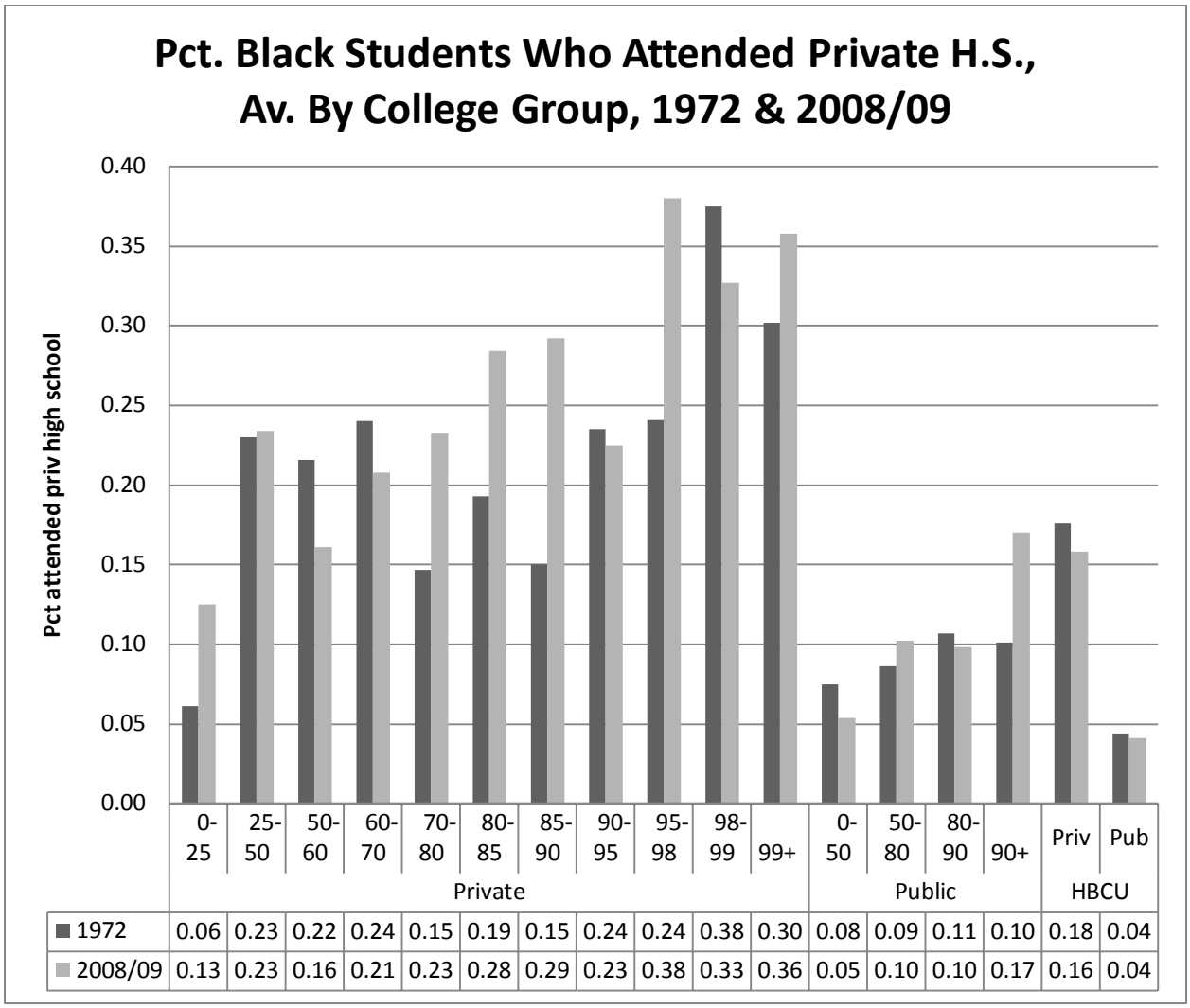
	Private											Public				HBCU	
	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
1972	0.06	0.08	0.04	0.20	0.06	0.19	0.11	0.17	0.08	0.15	0.10	-0.0	-0.0	-0.0	-0.0	0.02	-0.1
2008/09	0.03	0.07	0.04	0.10	0.09	0.19	0.10	0.18	0.16	0.22	0.16	-0.0	0.04	-0.0	-0.0	-0.0	-0.1

Figure 3.14



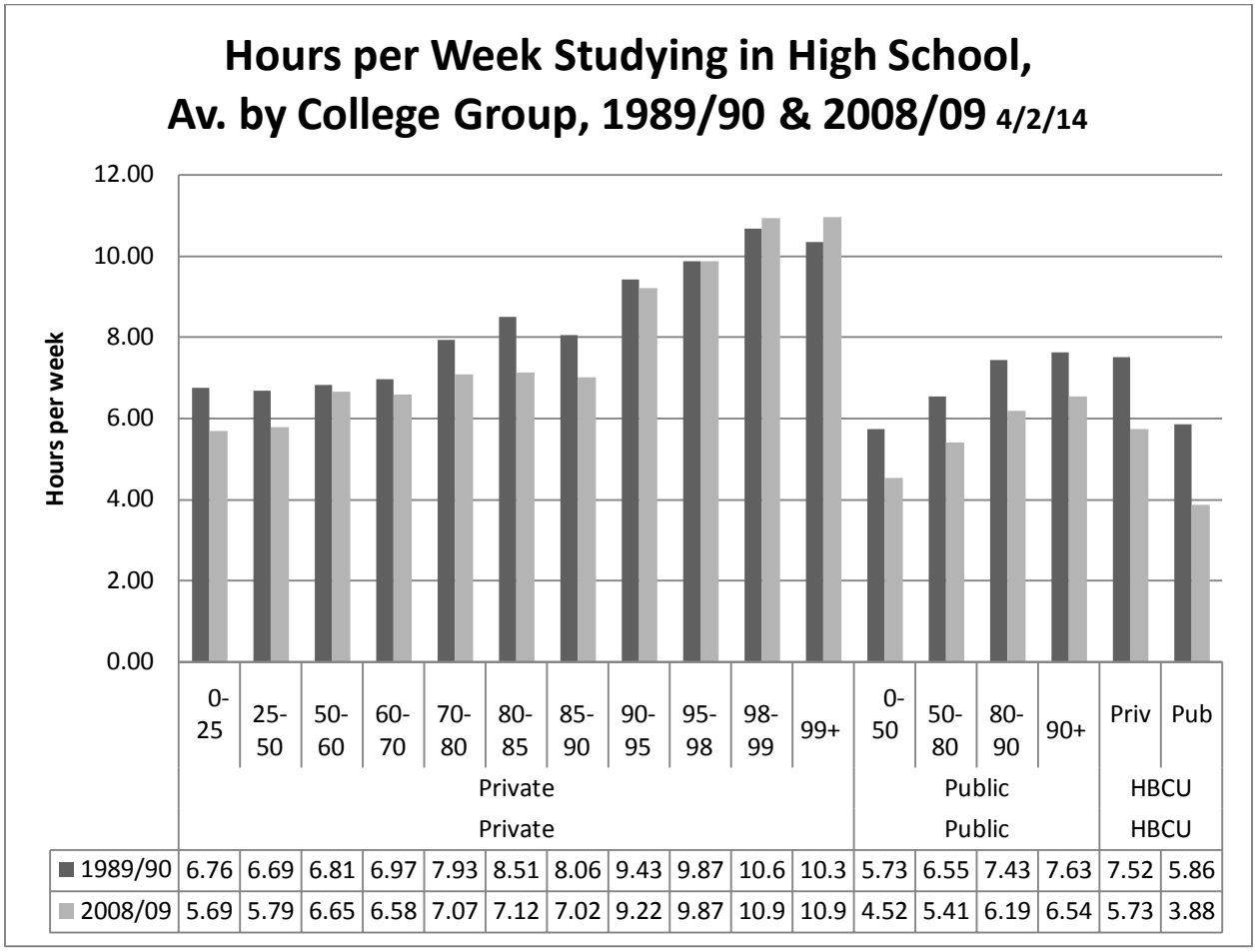
	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
1972	57,2	78,9	59,3	65,2	82,7	81,2	72,6	82,2	83,5	97,3	93,8	61,6	68,5	79,6	76,6	65,7	38,6
1989/90	102,	82,8	82,0	94,8	125,	105,	113,	124,	145,	156,	138,	66,2	110,	92,4	83,3	80,1	60,5
2008/09	89,8	123,	112,	107,	129,	133,	135,	150,	179,	154,	159,	88,6	103,	110,	104,	80,8	48,3

Figure 3.15



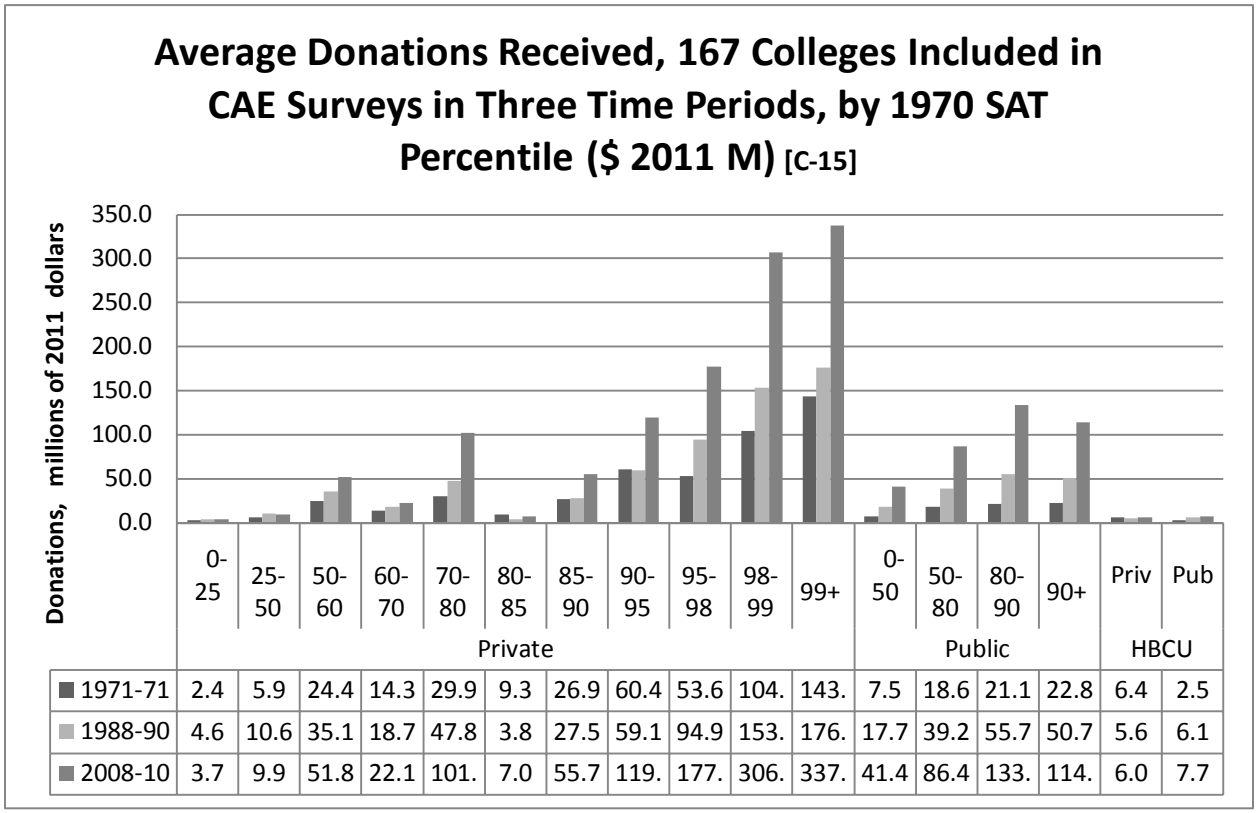
	Private											Public				HBCU	
	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
1972	0.06	0.23	0.22	0.24	0.15	0.19	0.15	0.24	0.24	0.38	0.30	0.08	0.09	0.11	0.10	0.18	0.04
2008/09	0.13	0.23	0.16	0.21	0.23	0.28	0.29	0.23	0.38	0.33	0.36	0.05	0.10	0.10	0.17	0.16	0.04

Figure 3.16



	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
	Private											Public				HBCU	
	Private											Public				HBCU	
1989/90	6.76	6.69	6.81	6.97	7.93	8.51	8.06	9.43	9.87	10.6	10.3	5.73	6.55	7.43	7.63	7.52	5.86
2008/09	5.69	5.79	6.65	6.58	7.07	7.12	7.02	9.22	9.87	10.9	10.9	4.52	5.41	6.19	6.54	5.73	3.88

Figure 3.17



	0-25	25-50	50-60	60-70	70-80	80-85	85-90	90-95	95-98	98-99	99+	0-50	50-80	80-90	90+	Priv	Pub
1971-71	2.4	5.9	24.4	14.3	29.9	9.3	26.9	60.4	53.6	104.	143.	7.5	18.6	21.1	22.8	6.4	2.5
1988-90	4.6	10.6	35.1	18.7	47.8	3.8	27.5	59.1	94.9	153.	176.	17.7	39.2	55.7	50.7	5.6	6.1
2008-10	3.7	9.9	51.8	22.1	101.	7.0	55.7	119.	177.	306.	337.	41.4	86.4	133.	114.	6.0	7.7

Source: author's calculations; Council for Aid to Education data on voluntary support of education, total contributions that universities received from foundations, alumni, other individuals, corporations, and religious and other organizations. Sample includes 167 four-year institutions with reported data for at least one year in each of these periods: 1971-73, 1988-1990, and 2008-2010. See text. [C-15]

Tables

Table 3.1. The Sample of 188 Colleges, by Group [C-3]

Type and 1970 SAT percentile	Colleges in sample	First-year students, 1970 average SAT*	Enrollment*	*Illustrative Example*
Private colleges and universities				
0-25 pct	14	912	865	Iowa Wesleyan College
25-50 pct	24	975	1,344	Gonzaga University
50-60 pct	10	1016	3,317	Ohio Northern University
60-70 pct	12	1043	2,482	Texas Christian University
70-80 pct	19	1086	2,347	University of the Pacific
80-85 pct	13	1120	1,603	Lewis & Clark College
85-90 pct	8	1143	1,906	Tulane University
90-95 pct	20	1191	1,799	Colorado College
95-98 pct	12	1253	2,804	Northwestern University
98-99 pct	9	1307	1,706	Princeton University
99+ pct	9	1367	1,384	Amherst College
Public colleges and universities				
0-50 pct	7	971	5,163	University of North Dakota
50-80 pct	7	1069	4,831	University of Michigan-Flint
80-90 pct	5	1124	11,850	UNC Chapel Hill
90+ pct	6	1209	4,404	Stony Brook University
Historically Black Colleges and Universities				
Private	8	738	1,691	Howard University
Public	5	729	2,311	Winston-Salem State University
Total	188			

Source: *College guides about 1970; see Appendix for details.
Student-level survey responses taken from HERI Freshman Survey, collected for 1972, either 1989 or 1990, and either 2008 or 2009.
Note: Average SAT score includes converted ACT scores. For details on calculation of percentiles, see Appendix.

Table 3.2 [C-10]. Racial/Ethnic Composition, Three Cohorts

Age in 2009	55	38	19
Year when 18 years old	1972	1989	2008
Percentage by race and ethnicity, 2009:			
Hispanic origin	9.5	17.2	18.1
Non-Hispanic white alone	73.9	62.6	59.8
Black alone	11.3	13.2	16.0
American Indian alone	0.9	1.0	1.3
Asian or Hawaiian, PI alone	4.3	6.0	4.1
Two or more races	0.9	1.2	2.3
Sum	100.7	101.3	101.6

Source: Statistical Abstract of the United States: 2012-13, Table 11, pp. 14-15. Hispanic origin is considered an ethnicity, not a race. Components may sum to more than 1.0 because non-white Hispanic origin counted twice.

Appendix Table 3X. Enrollment Weights by College Group					
		1972	1989	2008	
Private	0-25	0.038	0.042	0.051	
	25-50	0.044	0.043	0.050	
	50-60	0.036	0.033	0.031	
	60-70	0.032	0.031	0.032	
	70-80	0.030	0.030	0.028	
	80-85	0.013	0.013	0.012	
	85-90	0.018	0.017	0.017	
	90-95	0.025	0.024	0.024	
	95-98	0.019	0.019	0.016	
	98-99	0.010	0.010	0.010	
	99+	0.010	0.010	0.008	
Public	0-50	0.372	0.378	0.372	
	50-80	0.205	0.205	0.200	
	80-90	0.074	0.072	0.071	
	90+	0.038	0.039	0.041	
HBCU	Priv	0.010	0.011	0.010	
	Pub	0.024	0.025	0.025	
Note: Numbers show the enrollment in each group					
as a share of all four-year college enrollment, by year.					
C-26.					