The Evolution of Class Inequality in Higher Education: Competition, Exclusion, and Adaptation

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This study develops a comprehensive theoretical framework regarding the evolution of the class divide in postsecondary education. I conceptualize three prototypes of class inequality—effectively maintained, declining, and expanding—and associate their emergence with the level of competition in college admissions. I also unearth the twin mechanisms, exclusion and adaptation, that link class hierarchy to a highly stratified postsecondary system in an allegedly meritocratic environment. Intra- and inter-cohort comparisons reveal that while the class divide regarding enrollment and access to selective postsecondary schooling is ubiquitous, it declines when competition for slots in higher education is low and expands during periods of high competition. In such a regime of effectively expanding inequality (EEI), a greater emphasis on a certain selection criterion (like test scores) in admission decisions—required to sort the influx of applicants—is bolstered by class-based polarization vis-à-vis this particular criterion. This vicious cycle of exclusion and adaptation intensifies and expedites the escalation of class inequality. The results show that adaptation is more effective than exclusion in expanding class inequality in U.S. higher education.

Studies have documented the persistent effect of socioeconomic status in producing differences in access to postsecondary education since the turn of the twentieth century in the United States. For cohorts born before 1950, family background exerts a significant effect on college attendance (Mare 1980). Postsecondary education has expanded in recent decades, however. Between 1955 and 2005, total fall enrollment in degree-granting institutions rose from 2.6 to 17.5 million, and the college enrollment rate of high school graduates increased from around 45 to 70 percent during the same period (NCES 2008). To accommodate this growth, the number of institutions more than doubled (reaching 4,300 by 2006) and existing institutions expanded.

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From a modernization/industrialization perspective, such a massive expansion of higher education should narrow class gaps in college attainment by fostering high rates of educational upward mobility (Kerr et al. 1960; Parsons 1970; Treiman 1970). Underprivileged high school graduates should disproportionately benefit from this expansion, as new avenues of upward mobility should open to them. Some scholars cast doubts on this optimistic view (e.g., Jencks and Riesman 1968:154), predicting persistent class inequality in higher education amid a massive expansion: "It is clear that universal higher education and the academic revolution will not contribute to the emergence of an egalitarian, classless society in the same relatively clear-cut way that they contribute to the emergence of a non-sectarian, ethnically homogenized, nationally organized, and in some ways sexually undifferentiated one."

Indeed, a plethora of studies continues to document class-based gaps in college attendance. To reconcile these findings with the rise

in the capacity of the postsecondary system, maximally maintained inequality (MMI) posits that class inequalities in educational attainment will persist until all members of high-status groups attain a threshold educational attainment level (Raftery and Hout 1993). Accordingly, inequality in higher education persists because college education is not universal, even among the privileged. Moreover, when high-status groups reach a saturation point at a certain level of education, inequality simply shifts upward to the next level of attainment, thereby perpetuating relative class differences.

Notably, most of the expansion in the postsecondary educational system occurred in the two-year sector; enrollment rose only slightly at four-year public universities and stagnated at four-year private universities (NCES 2008). Not surprisingly, socioeconomic status is a key determinant not only of college enrollment but of students' attendance destinations. Since the 1960s, students from low socioeconomic backgrounds have been much more likely to attend two-year colleges, while their privileged counterparts matriculate at prestigious four-year institutions (Baker and Velez 1996; Davies and Guppy 1997; Hearn 1984, 1988, 1990, 1991; Karabel and Astin 1975; Karen 2002; Kingston and Lewis 1990; Persell, Catsambis, and Cookson 1992). In 1992, students from families in the bottom quartile of the SES distribution represented only 7 percent of students at four-year second-tier institutions and a meager 3 percent of students at elite schools (Carnevale and Rose 2004; see also Bowen, Kurzweil, and Tobin 2005).

Lucas (2001) distinguishes between quantitative and qualitative aspects of inequality at the high school level to argue that privileged groups use their status advantages to secure quantitatively similar but qualitatively superior educations. This, in turn, perpetuates inequalities. Extending this view of effectively maintained inequality (EMI) to the postsecondary system, we presume that as a larger share of high school graduates reaches some form of higher education, class differences in access to selective college destinations becomes more prominent to preserve the status hierarchy. Well-off youth gravitate toward the more selective schools, while the underprivileged are increasingly admitted only to less prestigious institutions.

These conceptions of inequality raise two fundamental questions. The first issue is whether qualitative differences replace or augment quantitative differences in importance over time (Lucas 2001). If the former is true, the level of inequality will persist over time. Yet if the privileged use their socioeconomic advantages to secure *both* quantitatively and qualitatively better outcomes, the class divide will expand. To my knowledge, this critical issue has never been adjudicated. As a result, the meaning of "maintaining" inequality remains vague. I use the level of competition in admissions, encompassing both the supply of slots and the demand for postsecondary education, to develop a comprehensive theoretical framework regarding the evolution of the class divide in postsecondary education. In this framework, EMI is severed from both effectively expanding inequality (EEI) and effectively declining inequality (EDI) to express patterns of a growth or a decline in qualitative and quantitative differences

A greater challenge for the sociological imagination is the question of *how* class inequality can grow at times of expansion. What facilitates privileged youth's improved access to the postsecondary system and their inclination toward selective institutions in an ostensible meritocracy? This study broadens the current conceptions of inequality by exploring the causal mechanisms that link class stratification to a highly stratified postsecondary system. I propose a refinement to theories of social closure (Karabel 1984, 2005; Parkin 1979) by unearthing the twin mechanisms that the privileged use to expand inequality: exclusion and adaptation. Filling a longstanding lacuna, this study sheds light on the extent to which these twin mechanisms intensify and expedite the escalation of class inequality. I argue that a key element for effectively expanding inequality is the adaptation of the privileged to exclusionary barriers.

The empirical investigation extends the current scholarship on class inequality in higher education on two fronts. First, I assess a wide spectrum of postsecondary destinations to test whether qualitative differences in equality supplant or augment quantitative ones. I gauge stratification in kind at the postsecondary level by using an inclusive measure of postsecondary destinations that simultaneously considers probability of enrollment and type/selectivity of college. Second, to adjudicate between the three prototypes of inequality, I adopt a historical

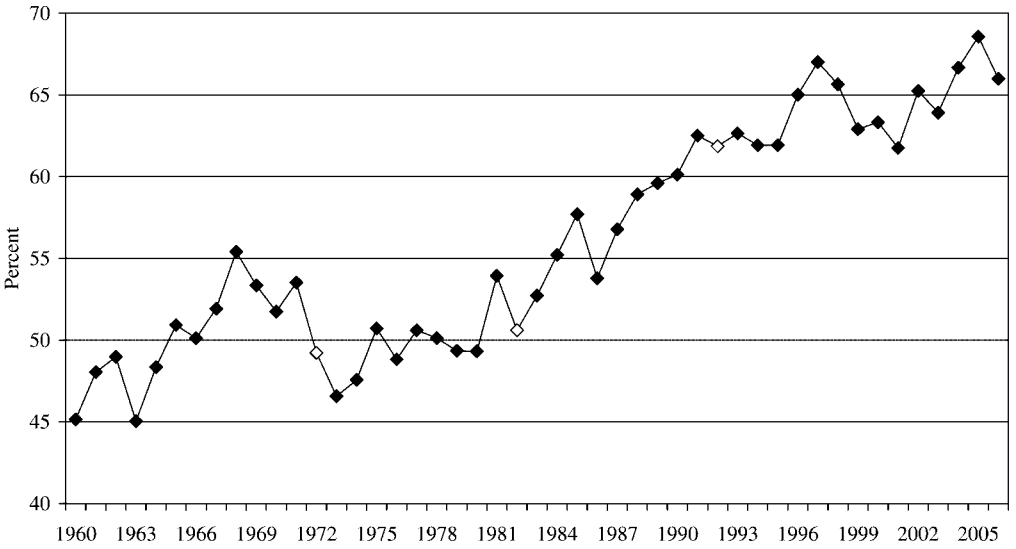


Figure 1. Annual College Enrollment Rate for High School Seniors, 1960 to 2006

Source: The National Center for Education Statistics (2008).
Note: Empty markers designate the cohorts of the three national surveys.

perspective. I examine the evolution of class inequality in access to and type of college attended during adjacent periods of rising and declining competition for slots in higher education. To allow for intra- and inter-cohort comparisons, I pool three representative national data sets: National Longitudinal Study of the High School Class of 1972 (NLS72), High School and Beyond (HS&B), and National Education Longitudinal Survey (NELS). Using the pooled data, I model the change in the extent to which social class affects college destination for cohorts that graduated from high school in 1972, 1982, and 1992. This approach is an advance over the mostly cross-sectional prior research that does not directly assess temporal changes (see Breland et al. 2002; Ellwood and Kane 2000; Jackson 1988; Karen 2002; B. T. Long 2004; Turley, Santos, and Ceja 2007).

COMPETITION AND THE EVOLUTION OF CLASS INEQUALITY IN U.S. HIGHER EDUCATION

Trends in supply and demand for postsecondary education reveal a roller coaster in the competition in admissions in recent decades. Between 1955 and 1970, a period known as the "Tidal Wave," applications and enrollment swelled at colleges and universities across the United States (Duffy and Goldberg 1998). The number of 18- to 24-year-olds grew by 60 percent, from 15 to 24 million, reflecting the maturation of the first children of the baby boom (U.S. Census Bureau 2004). The high school graduation rate increased and the absolute number of high school graduates doubled between 1955 and 1969 (NCES 2008). Consequently, the demand for higher education rose substantially (see Figure 1). During the 1960s, the college-going rate increased by nearly 10 percentage points; by 1968, more than half of high school graduates were attending college. To accommodate the steep rise in demand, the postsecondary system expanded dramatically by increasing the capacity of existing institutions and adding new institutions, such as community colleges, regional universities, and additional branches of existing universities. In the late 1960s, a record number of applicants applied to schools with competitive admissions, which led these institutions to tighten their admissions. To illustrate, in 1969, Harvard offered admission to only 17 percent of their applicants, a decline of more than 20 percentage points since the early 1960s. Yale's admission rate in 1969 to 1971 (around 18 per-

cent) was the lowest the school saw between 1956 and 1986.[1]

During the 1970s, the tidal wave of students ebbed. Several factors contributed to this change, including a drop in absolute size of the college-age population, a decline in the high school graduation rate, worsening economic conditions, and a decline in the wage premium for college graduates (Baker and Velez 1996; Duffy and Goldberg 1998). In the mid-1970s, the college-going rate reached a low of 47 percent (see Figure 1). Consequently, colleges and universities across the country struggled to fill their freshman classes. On May 1, 1972, an estimated 85 percent of all U.S. colleges and universities were still seeking applicants for the fall (Duffy and Goldberg 1998). Elite institutions did not literally experience a shortage of applicants, but they, like other schools, felt the crunch. This shortage of applicants amid ongoing expansion lowered the threshold for admissibility by forcing colleges and universities to be less selective in choosing students. At Yale, for instance, the admission rate for the class entering in 1975 was 27 percent, a growth of 9 percentage points in just five years. The behavioral adjustment to such a low level of competition soon followed: the mean SAT scores of college-bound seniors declined from 1039 to 994 between 1972 and 1980 (The College Board 2008).

Since the mid-1980s, the competition for slots in higher education has again increased. Although the number of high school graduates continued to decline, the number of students enrolled in college fell only slightly (Baker and Velez 1996; Duffy and Goldberg 1998) because the college-going rate increased, reaching 62 percent by 1992 and continuing to rise thereafter (Figure 1). This growth is attributed, at least partially, to the rebounding wage premium for college education in the 1980s, which strengthened the economic incentives to attend college (Clotfelter 1993). Moreover, the establishment of annual college rankings in the early 1980s drew attention to the stratification between institutions.[2] The mean SAT scores of college-bound seniors began to rise in the mid-1980s and have continued to do so ever since (The College Board 2008). All these forces combined to intensify the competition in admissions, especially at selective institutions (Alon and Tienda 2007; NACAC 2006). The most prestigious colleges capitalized on these trends, as the surge in demand allowed admissions officers to select students from a surplus of high-quality applicants (NACAC 2006).

Harvard's officials noted this reversal in trends: "Applications for the Class of 1988 reversed a four year trend of decline and rose significantly" (*Report of the President of Harvard College 1983–1984* 1985:96). In 1988, they documented a record number of applicants (14,436) since the university's founding, a record broken only in the mid-1990s. Yale saw a twentieth-century record in 1987 with more than 13,000 applicants (only since 2001 has the annual number of applicants risen above 14,000).[3] This heightened demand accompanied a decline in admission rates at both institutions starting in the mid-1980s, continuing to fall until today (reaching 7.7 and 8.6 percent in 2008 at Harvard and Yale, respectively).

Class inequality in higher education is probably ubiquitous, given the cumulative effect of inequality in kindergarten through high school, but the historical review provides clues as to whether and when we might expect the expansion of class inequality in recent decades. The volatility of competition in admissions inevitably delineates the magnitude of class gaps in higher education. When the supply of postsecondary education surpasses demand (i.e., when the level of competition is low, such as during the 1970s), both qualitative and quantitative differences should contract and class

[1] I track undergraduate admission indicators for several elite institutions. For parsimony, I report admission statistics (number of applicants and admission rate) mainly for Harvard and Yale. I obtained this information from Harvard University's *Presidents' Reports* and Yale University's Office of Institutional Research.

[2] *Barron's Profiles of American Colleges* debuted in 1981, the *U.S. News and World Report*'s rankings in 1983.

[3] Other selective schools experienced the same dramatic change. At the University of Pennsylvania, for example, applications rose from a low of 7,485 in 1983 to a peak of 13,105 in 1988. The admission rate declined from 43 to 35 percent during these five years.

inequality should decline in regard to access to the least selective two- and four-year destinations; inequality should decline or remain the same vis-à-vis four-year selective destinations. Supporting a pattern of effectively declining inequality (EDI), we see that the class divide in college attendance narrowed between 1972 and 1980, while the divide regarding two- versus four-year college attendance remained stable (Alexander, Holupka, and Pallas 1987; Alexander, Pallas, and Holupka 1987).

Alternatively, when the college squeeze intensifies, qualitative differences augment quantitative ones and the class divide should widen in access to *all* college destinations, especially selective institutions. Findings for the 1980s support such an effectively expanding inequality (EEI). Ellwood and Kane (2000) show that gaps by family income, particularly in admission to four-year institutions, widened between the 1982 and 1992 cohorts. Likewise, Karen (2002) shows that the effect of father's education and parental income on the selectivity of college attended approximately doubled during the same period. Soon after applications started mounting at Harvard in the mid-1980s, there were signs that a college squeeze would lead to a widening class divide in access to selective institutions: "The proportion of students applying, admitted, and registering from private schools increased somewhat for the first time in several years. This shift is all the more significant since the geographical shift away from the Northeast would normally work in favor of public school candidates" (*Report of the President of Harvard College 1984–1985* 1986:106–107).

How did class-based inequality in higher education change between 1972 and 1992? I hypothesize the following: (1) High school graduates from low socioeconomic strata are at a marked disadvantage in access to postsecondary education in all cohorts and this disadvantage increases with college selectivity. (2) Class inequality in postsecondary education narrowed at all postsecondary destinations between 1972 and 1982 (EDI) and intensified at all destinations between 1982 and 1992 (EEI). These two conflicting patterns may have resulted in an effectively maintained inequality (EMI) between 1972 and 1992.

A MECHANISM-BASED THEORY FOR EFFECTIVELY EXPANDING INEQUALITY: EXCLUSION AND ADAPTATION

The main question is how class inequality is able to grow in times of intense competition for slots, and how such a process is woven into the meritocratic ethos of postsecondary education. In his book *Durable Inequality,* Tilly (1998:34) notes: "Analysts of inequality occupy something like the position of seismographers. In an explanation of earthquakes, the recognition that the shifting of great tectonic plates beneath the earth's surface causes much of the heaving and cleaving in that surface." I attempt to deepen the conceptions regarding stratification processes by identifying the underlying "great tectonic plates" that caused the earthquake in U.S. class inequality in the mid-1980s.

Weber's notion of social closure can help us understand the mechanisms that expand class-based inequality in higher education. Social closure is a process whereby social collectivities seek to maximize rewards by restricting access to resources and opportunities to a limited circle of eligible individuals. Certain social or physical attributes are used as the basis of exclusion, based more on selection than on hereditary transmission (Parkin 1979). Exclusion is primarily a collective act intended to promote class formation through careful selection of successors (Collins 1971; Parkin 1979). From this perspective, high-status groups struggle to maintain their privileges by influencing the criteria used to control access to higher education (Karabel 1984, 2005; Karen 1990).

Parkin (1979) notes that in modern capitalist society there are two main exclusionary devices for monitoring entry into key positions: growing property barriers and the inflated use of academic qualifications. Not surprisingly, the two most noteworthy trends in the context of postsecondary education since the 1980s are escalating college tuition (Trends in College Pricing 2005) and an inflated emphasis on standardized test scores in admission practices (Alon and Tienda 2007). Both changes restrict access to selective institutions and magnify qualitative differences. The ability to pay for education notwithstanding, however, college preparedness is by far a more consequential factor for

determining college access and choice (Bowen 2006; McPherson and Schapiro 2006).

Ample evidence demonstrates that academic selection underlies the poor chances of seniors from low socioeconomic backgrounds for attending selective universities. Some scholars argue that the effect of social class is mediated entirely through academic achievements (Alexander, Holupka, and Pallas 1987; Alexander, Pallas, and Holupka 1987; Davies and Guppy 1997; Hearn 1984, 1988, 1991; Karen 2002; Sewell 1971). Indeed, exclusion on the basis of educational credentials is accepted as more legitimate than exclusion on the basis of race, ethnicity, religion, or gender because it appears to be based on individual merit (Murphy 1988). In this context, standardized test scores have played a unique role in the stratification of higher education since the mid-1980s. On the one hand, test scores stratify educational options because they are the main criteria used by various college rankings to classify postsecondary institutions. On the other hand, the public perceives test scores as a legitimate mechanism for sorting high school graduates according to meritocratic rules.

Standardized test scores became widespread as a screening instrument only in recent decades. In the 1950s, only a few hundred postsecondary institutions considered test scores in their admission decisions. Most four-year schools do so today (NACAC 2006). While the number of enrolled students rose by about seven times between 1947 and 2001, the number of SAT-takers rose about 70-fold during the same period.[4] Given the growing competition for slots since the mid-1908s, the use of standardized test scores intensified in an effort to ease the evaluation of a growing volume of highly qualified and heterogeneous student pools (Alon and Tienda 2007; Lemann 1999; NACAC 2006). While institutions now rely heavily on test scores in their admission decisions, other merit criteria, like class rank, have declined in importance (Alon and Tienda 2007). This "shifting meritocracy" means rising returns to test scores in admission at the more selective schools, favoring seniors with high test scores. Because socioeconomic status is highly correlated with test achievements (Blau et al. 2004; Crouse and Trusheim 1988; Fischer et al. 1996; Rothstein 2004; Sacks 1999), high school graduates from the top socioeconomic echelons are better situated to benefit from the shifting meritocracy.

A test-scores barrier for admission may perpetuate class inequality, but it does not solve the problem of hereditary transmission, that is, the common desire to transmit privileges to one's own. All students—affluent, poor, and middle class—face the same academic barriers because exclusionary rules are universal. Parkin (1979:63) describes one strategy that can preserve the kinship link and the intergenerational transmission of status—the adaptation of the bourgeois family to institutional demands:

> In systems based on aristocratic, caste, or racial exclusion, families of the dominant group can expect to pass on their privileged status to their own descendants as a direct result of the closure rules in operation, however socially lethargic those families might be. The bourgeois family, by contrast, cannot rest comfortably on the assumption of automatic class succession; it must make definite social exertions of its own or face the very real prospect of generational decline. In other words, although the typical bourgeois family will certainly be better equipped than most to cope with a closure system on its children's behalf, it must still approach the task more in the manner of a challenge with serious risks attached than as a foregone conclusion.

The privileged group not only seeks to shape the contours and the importance of the admission criteria (to preserve the collective), but it also devotes considerable effort to cultivating their offspring's stock of academic currencies to ensure succession along kinship lines.

How does this adaptation occur? Middle- and high-SES parents are heavily involved with their offspring's academic activities and tracking placement in high school (Lareau 2000; Lareau and Horvat 1999; Lucas 1999; Massey et al. 2003). These parents convey their postsecondary expectations when their children are young, they better understand the postsecondary landscape and competitive admission process, and they invest in resources to promote college attendance. Since the mid-1980s, these parents have become painfully aware of the stratification in the postsecondary system and the importance of test scores in admission decisions.

[4] In 1926, its debut year, 8,026 students took the SAT; by 1942, the number reached 20,000 students, compared with 1.4 million SAT-takers in 2003 (Carnahan and Coletti 2003; Lemann 1999).

Vigorous use of expensive test preparation tools, such as private classes and tutors, are a key element of the adaptation strategy. Indeed, 70 percent of privileged seniors use some test preparation activities (30 percent use more than one type of training), compared with less than half of low-SES students (Buchmann, Roscigno, and Condron 2006; see also Briggs 2001; McDonough 1994; NACAC 2009; Powers 1993). Affluent students also take the test multiple times, improving their scores (Vigdor and Clotfelter 2003). This preparation significantly boosts test scores and helps the privileged gain access to selective institutions (Buchmann et al. 2006; NACAC 2009). Rising income inequality since the 1970s (Morris and Western 1999) has further polarized high school students' ability to use test preparation activities. Growing differences in school quality reinforce this adaptation because socioeconomically advantaged youth are more likely to attend private and college-preparatory secondary schools. These schools are more attuned to the changing admission criteria and to parents' demands, so they add preparation for standardized tests, augment their college-oriented curriculum, and provide better-qualified teachers and counselors (Fischer et al. 1996; Sacks 2007; Schneider, Martinez, and Owens 2006).

These adaptation strategies elevate privileged students' test achievements and, consequently, the group's average test scores. In turn, this leads to class-based polarization of resources, placing privileged students in a better starting position for admission to selective schools. Indeed, differences in test scores between high school seniors from the top and bottom socioeconomic strata have widened noticeably over the past 16 years (Bowen et al. 2005). We can therefore expect that class-based polarization in test scores (adaptation) accompanies and bolsters a greater emphasis on test scores in admission (exclusion). The changes in the returns and level of standardized test scores benefit those with more resources to cultivate their test achievements and the power to influence how merit is defined. At the same time, opportunities for socioeconomically disadvantaged students are restricted. These two dimensions, exclusion and adaptation, reinforce one another and amplify inequality. They also expedite the pace at which the privileged cement their superior position. In this way, class inequality in higher education not only persists but actually expands, despite the system's growing capacity.

Figure 2 presents this comprehensive scheme for the evolution of class inequality in higher education. When competition in admissions is high, exclusion and, particularly, adaptation increase class-based inequality vis-à-vis *all* college destinations. Inequality effectively expands. Alternatively, when colleges struggle to fill their classes, all postsecondary destinations relax their admission barriers, and the system becomes more inclusive. When exclusionary barriers are negligible, the privileged do not need to cope with a closure system. Complementing the first two hypotheses, I argue that (3) rising academic barriers (exclusion) and polarization of test scores (adaptation) helped augment class inequality in higher education during the 1980s when the competition in admissions was high. I do not expect to find such effects during the 1970s.

Most sociological writing focuses on exclusionary practices; there is little understanding of the role that adaptation plays in effectively expanding inequality. Exclusion often takes ideological precedence over adaptation because of its collective property of ensuring class reproduction (Parkin 1979). The omission of adaptation from stratification theory, however, obscures the mechanisms that expand class inequality in higher education; it is thus unclear which aspect is more important for the polarization of the status hierarchy. Filling this lacuna, I hypothesize that (4) because adaptation varies by social class, unlike exclusion which is universal, adaptation is more effective than exclusion in expanding class inequality. If so, adaptation is the key mechanism underlying the widening class divide in U.S. higher education.

DATA AND METHODS

Data Sets

I use three nationally representative cohorts of seniors who graduated from high school in 1972, 1982, and 1992. The National Longitudinal Study of the High School Class of 1972 (NLS72) surveyed 22,652 high school seniors in 1972. High School and Beyond (HS&B) surveyed 14,825 sophomores in 1980 and re-interviewed them in 1982, yielding an analytic sample of 12,716 graduates of the class

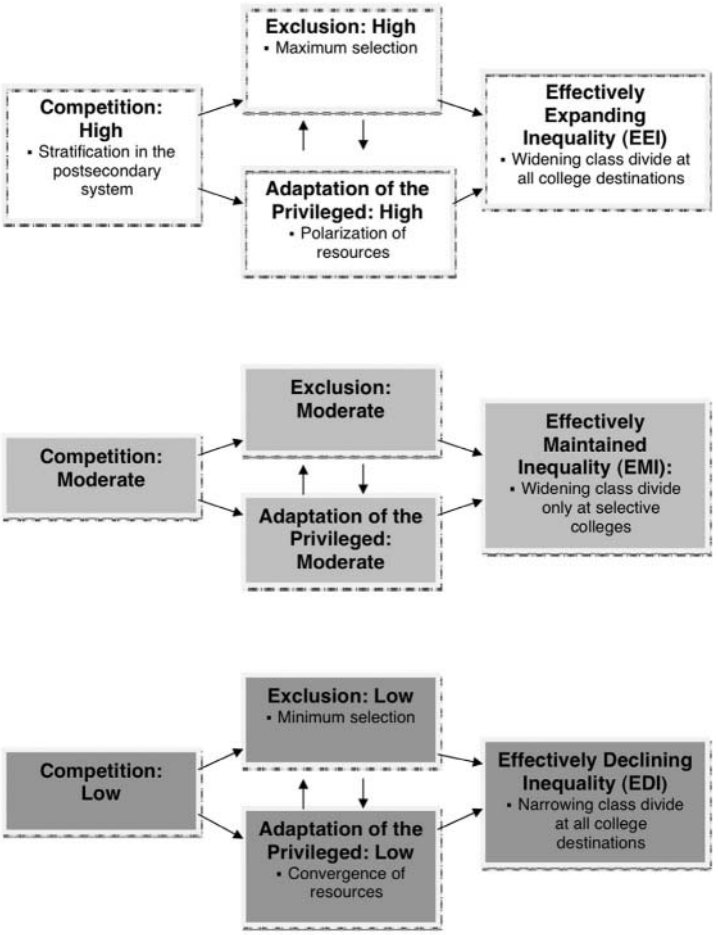


Figure 2. A Comprehensive Scheme for the Evolution of Class Inequality in Higher Education

of 1982. I also use the National Education Longitudinal Survey (NELS), which began with a cohort of 8th graders surveyed in 1988 who were re-interviewed as high school sophomores and seniors, yielding an analytic sample of 13,093 high school graduates of the class of 1992. To track temporal changes in the 1970s, I pooled the NLS72 and HS&B data sets and created a flag indicating the survey year; for the 1980s I pooled the HS&B and NELS data sets. I report both data-set specific and pooled data results.

Before merging the data sets, I uniformly categorized all variables across all data sets. I also replaced the missing data in each data set using multiple imputation with Schafer's MI software NORM for incomplete multivariate data (Schafer 1999). I did not impute values for the dependent variable (postsecondary destination), although I did include this variable in the imputation model to derive unbiased estimates (Schafer 1997). All empirical estimates are based on five versions of complete data sets. I adjusted standard errors to within- and between-imputation variances using Rubin's (1987) rules, which take into account missing data uncertainty.[5]

Variables

Dependent variable. This study uses a more detailed dependent variable, postsecondary education, than is commonly used in the literature.

[5] One set of estimates is produced with STATA's Clarify module (King, Tomz, and Wittenberg 2000; Tomz, Wittenberg, and King 2003).

The variable is a multiple response category with five outcomes: (1) no postsecondary education; (2) two-year open-door colleges; (3) four-year nonselective colleges; (4) four-year selective colleges (median SAT 900 to 1050); and (5) four-year more selective colleges (median SAT above 1050). College ranking is based on *Barron's Profiles of American Colleges* (1982, 1992).[6] By providing further differentiation by college type and selectivity, I can uncover multiple layers of class inequality in higher education. Studies that overlook these layers and ignore the full spectrum of postsecondary destinations underestimate class gaps and distort the assessment of equality of educational opportunity because disadvantaged youth are more likely than their high-SES counterparts to discontinue education after high school or to enroll at vocational training or two-year open-door institutions. By allowing for nonlinearity or non-monotonic effects, the measure of postsecondary destinations in this study allows the impact of background characteristics to vary throughout the selectivity spectrum.

COVARIATES. I model postsecondary destinations as a function of socioeconomic status—a composite measure of SES provided by the three data sets—that I divide into quartiles. To gauge the breadth of the class divide, I compare the top and bottom SES quartiles, although I include the two middle quartiles in all analyses. The models control for test scores,[7] class rank, race and Hispanic origin, high school sector (public/private), geographic region, and sex. To allow for a direct comparison of the three cohorts, I convert test scores to their percentile distribution. Table A1 in the Appendix provides detailed definitions and descriptive statistics for variables analyzed from the three data sets.

ESTIMATION STRATEGY. With pooled cross-sectional samples, I can implement a difference-in-differences (DID) estimator (Ashenfelter 1978; Ashenfelter and Card 1985). I evaluate whether and how much class inequality by postsecondary destinations increased during the 1970s (between 1972 and 1982) and 1980s (between 1982 and 1992). I consider the odds formulation of the multinomial logit model (Long 1997) to assess how socioeconomic status affects the odds of a high school graduate attending a postsecondary destination *m* (for example, a two-year college) relative to a destination *n* (not attending):[8]

$$\Omega_{m|n}(\mathbf{x}) = \exp(\mathbf{x}\beta_{m|n})$$

where $\Omega_{m|n}(\mathbf{x})$ is the odds of outcome *m* versus outcome *n* given x.

The outcome is observed at three time points; **x** includes a variable *T,* indicating the year from which the observation is taken (coded 0 if the observation opens the decade [1972 or 1982], and 1 if it closes it [1982 or 1992, respectively]); dummies for the three bottom SES quartiles (compared with the high-SES quartile); and an interaction between SES and year, the focal interest of the DID analysis. It captures the change in class inequality in postsecondary destinations over time by comparing the difference between low- and high-SES seniors at t_1 relative to the difference between their counterparts at t_0. A value below one for the bottom SES*year interaction would support the hypothesis of rising class inequality between t_0 and t_1 for the *m* postsecondary destination (compared with destination *n*). A value greater than one for

[6] I manually extracted the college ranking information from old copies of the *Barron's Profiles of American Colleges* published in 1982 and 1992 and merged it with the HSB and NELS data, respectively. For the NLS72 data I use the classification for 1982, as the first edition of the *Barron's Profiles* appeared only in 1981. The *Barron's* classification ranks institutions by their academic competitiveness (from noncompetitive to most competitive). I use "selective" instead because it is the more intuitive and common term. Each school receives a *Barron's* exclusive academic rating, which is based on the median SAT or ACT entrance exam score, students' high school class rank, average grade-point average (GPA) of enrolled students, and the percentage of applicants accepted.

[7] I converted ACT scores to their SAT equivalents before applying the imputation procedures.

[8] I estimated a multinomial logit model instead of an ordered logit model for ease of interpretation. The nonlinear relationship between the independent variables and the predicted probabilities makes it difficult to interpret the ordered logit model (Long 1997).

SES*year would indicate declining class inequality over time. To account for heterogeneous dynamics in background characteristics that occur between t_0 and t_1, **x** also includes a vector of observed attributes that influence students' college attendance and all interactions between these background characteristics and year. I fit the multinomial logit models separately for the three cohorts and also to the pooled data.

LIMITATIONS. This study's analytic strategy features many improvements over current scholarship but is not without its limitations. First, defining postsecondary destination as the first institution attended ignores students' subsequent transfers. This may be a problem because students from lower socioeconomic backgrounds are more likely than economically advantaged students to transfer schools (Goldrick-Rab 2006). Classifying institutions into broad categories alleviates this problem somewhat because the between-tier transfer rate is much lower than the between-institution rate.[9] Second, using data for three cohorts one cannot precisely assess the time trend. Yet Figure 1 shows that the years of the three national surveys (discernible by an empty marker) represent the periods from which they are drawn. Finally, the study focuses on academic-related changes as an important mechanism that helped raise the level of class inequality. Economic forces, including the drastic rise in tuition at all postsecondary institutions since the 1980s, changes in financial aid, and the growth in income inequality, also contributed to the rise in the class divide (Morris and Western 1999; Trends in College Pricing 2005; Trends in Student Aid 2005). Further research is required to directly assess the significance of these pecuniary developments for the growth in class-based inequality in higher education.

[9] For example, when a student attending a more selective institution X transfers to a more selective institution Y after the first year, the between-tier transfer rate is nil.

THE EVOLUTION OF CLASS INEQUALITY: MULTIVARIATE RESULTS

The multivariate analysis models changes in social classes' differential access to an array of postsecondary destinations. Table 1 reports odds ratios for the bottom SES quartile, relative to high SES, on the multinomial postsecondary destination outcome (no postsecondary education (PSE) is the comparison group).[10] The results from all three cross-sectional models capture the ubiquity of the class divide. Supporting the first hypothesis, high school graduates from low socioeconomic strata are at a marked disadvantage in access to postsecondary education in all three cohorts. This disadvantage holds even after introducing controls to the model (results not shown). This result buttresses prior claims that socioeconomic gaps in higher education persist even when accounting for differences in academic ability and other background characteristics. A rise in class divide with college selectivity is also evident for all cohorts. In 1982, for example, the odds of low-SES high school graduates attending a two-year institution relative to not attending college altogether are only .346 of those for their high-SES classmates. The odds ratio declined monotonically with the rise in college selectivity: the similar odds of attending more selective schools are only .036.

The pooled data specification includes interactions between SES and year (lowest SESQ*year), which lie at the heart of the DID analysis. The difference in odds of attending more selective institutions between low- and high-SES seniors was larger in 1992 than in 1972, as seen in the estimate of the gross (unadjusted) inter-cohort change in the class divide between 1972 and 1992. At the same time, class inequality vis-à-vis enrollment at less selective destinations remained unchanged. The widening of the class divide at only selective colleges fits the prototype of EMI. However, separate analyses for each decade reveal that this pattern of EMI between 1972 and 1992 conceals consecutive periods of declining and expanding class inequality.

[10] Results for the middle two quartiles are not reported. They are available on request.

Table 1. Gross and Adjusted Class Gaps in College Destinations among 1972, 1982, and 1992 High School Graduates; NLS, HSB, NELS, and Pooled Data, Multinomial Logistic Odds Ratios

	Base Category = No Postsecondary Education				
	Two-Year	Four-Year Non-selective	Four-Year Selective	Four-Year More Selective	Pseudo R^2
Cross-Sectional Data					
Unadjusted Models					
NLS 1972 (N = 22,652)					
Lowest SESQ[a]	.252**	.145**	.057**	.038**	.05
HS&B 1982 (N = 12,716)					
Lowest SESQ	.346**	.182**	.100**	.036**	.05
NELS 1992 (N = 13,093)					
Lowest SESQ	.250**	.120**	.055**	.020**	.06
72 to 92: Pooled Data (N = 35,744)					
Unadjusted Model					
Lowest SESQ[b]	.252**	.145**	.057**	.038**	.06
Year 1992	1.340**	.920	1.233**	3.740**	
Lowest SESQ*year	.993	.828	.957	.516**	
72 to 82: Pooled Data (N = 35,368)					
Unadjusted Model					
Lowest SESQ[b]	.252**	.145**	.057**	.038**	.05
Year 1982	.791**	.484**	1.052	1.075**	
Lowest SESQ*year	1.372**	1.261	1.744**	.958	
Adjusted Model[c]					
Lowest SESQ	.302**	.170**	.092**	.078**	.16
Year 1982	.765**	.488**	.948	.943	
Lowest SESQ*year	1.278**	1.181	1.538**	.774	
82 to 92: Pooled Data (N = 25,808)					
Unadjusted Model					
Lowest SESQ[b]	.346**	.182**	.100**	.036**	.06
Year 1992	1.693**	1.901**	1.173	3.481**	
Lowest SESQ*year	.724**	.656**	.549**	.539**	
Adjusted Model[c]					
Lowest SESQ	.375**	.197**	.139**	.072**	.18
Year 1992	1.675**	1.755**	1.098	3.109**	
Lowest SESQ*year	.822	.967	.867	1.189	

[a] All models control for middle SES (results not shown).

[b] All models control for middle SES and its related interactions with the year dummies (results not shown).

[c] Controls included are: test scores, class rank, race/ethnicity, sex, type of high school, and region.

* $p < .05$; ** $p < .01$ (two-tailed tests).

Between 1972 and 1982, the gross (unadjusted) class divide narrowed substantially for all postsecondary destinations (the lowest SESQ*year is larger than 1) except more selective ones, for which class inequality remained unchanged, fitting the prototype of EDI. The difference in college attendance between high- and low-SES high school graduates in 1982 was smaller than the comparable difference in 1972. In the 1980s, as competition grew, we see a widening in the unadjusted class gaps in access to all postsecondary education, especially more selective schools. This widening matches the prediction of EEI. The increase in attendance chances for low-SES seniors during 1982 to 1992 was smaller than for high-SES seniors (the interactions between low SES and year are significant and below 1 for all destinations). Consequently, the difference in college attendance between high- and low-SES high school

graduates in 1992 was larger than the comparable difference in 1982.

This growing class inequality increases with college selectivity. For example, the gap between the chances of low- and high-SES seniors attending a two-year institution (relative to no PSE) was larger in 1992 than in 1982 (the odds for low-SES seniors were only .724 that of high-SES seniors), but the gap regarding attendance at more selective institutions was larger still (odds ratio = .539). Between 1982 and 1992, class disparities in access to more selective institutions widened more than those regarding attendance at two-year institutions, capturing barriers to low-SES youth that mount with selectivity and over time. With the increasing college squeeze from the mid-1980s, low-SES seniors lost ground compared with high-SES students, and their disadvantage became more acute the greater a college's selectivity. Taken together, the results for the two decades corroborate the second hypothesis.

Adjusting for background characteristics and scholastic qualifications does not change the pattern of EDI for the 1970s. Subject to these controls, however, the level of inequality remained unchanged between 1982 and 1992. When characteristics are held constant, low-SES seniors in 1992 are just as disadvantaged as their 1982 counterparts. This implies that other factors, such as temporal changes in covariate distributions (from immigration, geographic mobility, or test scores polarization) or changes in the value of these attributes for admissibility, are partly responsible for the growing class inequality during that decade.

EXPLAINING THE EVOLUTION OF THE CLASS DIVIDE

In the next analysis I identify changes in background characteristics that facilitated first decline and then growth in class inequality. I fit several models to the pooled data, separately for each decade. The specification is identical to the (unadjusted) base model in Table 1, while adding a different set of covariates to each model (including the interaction with the year dummy). Model 1 controls for test scores, Model 2 for class rank, Model 3 for race/ethnicity, Model 4 for sex, Model 5 for type of high school, and Model 6 for region. The results for both decades, reported in Tables 2 and 3, provide two interesting observations regarding the mechanisms that enabled the narrowing of the class divide in the 1970s and its growth during the 1980s. First, test scores explain the highest share of variation in college destinations. Second, test scores explain completely the decline and growth in class inequality (compare the estimates for lowest SESQ*year with those in Table 1). No other covariate produces the same effect. Changes in the level or the value of test scores are thus mostly responsible for the shifts in the class divide during these two decades.

I compare the inter-cohort changes in the level of test scores of high school graduates by SES quartiles. Figure 3 presents a box-plot of the percentile distributions of test scores for the three cohorts, for the top and bottom SES quartiles. Within cohorts, SES differences in test scores are considerable. In 1972, the percentile mean of test scores for low-SES high school graduates was 35, compared with 68 for high-SES seniors. The class divide in test scores persisted in 1982 and 1992. Yet there are important temporal swings in the position of both low- and high-SES seniors in the test score distributions.[11] Between 1972 and 1982, disadvantaged seniors improved their position in the overall percentile test score distribution (from 35 to 38 on average; this change is significant at $p < .01$), especially the high achievers among them (those located in the group's 75th percentile). Simultaneously, all privileged seniors saw their advantage decline (from 68 to 65 on average; significant at $p < .01$). In summary, during the 1970s, a decade of declining competition in admissions, there was a convergence in test scores of low- and high-SES youth.

However, in parallel to the intensification of the college squeeze in the 1980s, class-based polarization in test scores emerged. While the percentile mean of low-SES seniors' test scores declined from 1982 to 1992 (from 38 to 32 on average; significant at $p < .01$), high-SES seniors improved their relative standing (from 65

[11] Because I use a percentile measure of test scores, these temporal shifts capture the stratum's relative position in the overall test score distribution and cannot be attributed to secular changes in test scores.

Table 2. Adjusted Class Gaps in College Destinations, Tests for Various Covariates; 1972 and 1982 High School Graduates, NLS and HSB Pooled Data, Multinomial Logistic Odds Ratios

	Base Category = No Postsecondary Education				
Year 1972 to 1982 Pooled Data (N = 35,368)	Two-Year	Four-Year Non-selective	Four-Year Selective	Four-Year More Selective	Pseudo R^2
Control: SAT scores					
Lowest SESQ	.371**	.297**	.168**	.169**	.12
Year 1982	1.221	.865	3.789**	2.280**	
Lowest SESQ*year	1.099	.915	1.028	.585**	
Test scores (percentile)	1.018**	1.033**	1.052**	1.084**	
Scores*year	.992**	.991**	.982**	.990**	
Control: HS Class Rank					
Lowest SESQ	.261**	.157**	.063**	.045**	.11
Year 1982	.850	.526**	1.308*	.856	
Lowest SESQ*year	1.293**	1.112	1.494**	.767	
Class rank (percentile)	1.014**	1.029**	1.037**	1.057**	
Rank*year	.999	1.000	.998	1.005	
Control: Race/Ethnicity					
Lowest SESQ	.223**	.115**	.053**	.035**	.06
Year 1982	.784**	.489**	1.053	1.033	
Lowest SESQ*year	1.506**	1.543**	1.922**	1.107	
Black	1.364**	2.021**	1.284**	1.312*	
Black*year	.745**	.710**	.788*	.758	
Hispanic	1.432**	1.204	1.064	1.050	
Hispanic*year	.809*	.684*	.885	.740	
Asian	5.532**	1.079	8.130**	8.940**	
Asian*year	.308**	.902	.259**	.549	
Control: Female					
Lowest SESQ	.252**	.145**	.058**	.039**	.05
Year 1982	.667**	.419**	.830*	.895	
Lowest SESQ*year	1.326**	1.226	1.672**	.931	
Female	1.001	.986	.878**	.764**	
Female*year	1.444**	1.370**	1.662**	1.508**	
Control: Public HS					
Lowest SESQ	.252**	.145**	.058**	.038**	.06
Year 1982	1.153	.739*	1.340**	1.534**	
Lowest SESQ*year	1.460**	1.376**	2.030**	1.178	
Public HS	1.034	.965	.599**	.577**	
Public*year	.610**	.557**	.615**	.490**	
Control: Region					
Lowest SESQ	.266**	.132**	.059**	.038**	.07
Year 1982	.831*	.423**	.983	1.114	
Lowest SESQ*year	1.341**	1.373**	1.674**	.901	
South	1.005	2.290**	.540**	.331**	
South*year	.947	1.025	1.144	.656**	
Midwest	.992	1.586**	.777**	.264**	
Midwest*year	1.084	1.546**	1.092	1.036	
West	1.765**	.899	.707**	.401**	
West*year	.817*	.971	1.021	1.109	

Note: All models control for middle SES and its related interactions with the year dummies (results not shown).
* $p < .05$; ** $p < .01$ (two-tailed tests).

to 70 on average; significant at $p < .01$). Notably, among high-SES seniors, the low achievers (the 25th percentile) improved the most in the test score distribution between 1982 and 1992, while among low-SES seniors, plummeting test scores affected the high-achieving seniors the most. Overall, in 1982, high-achieving low-SES seniors surpassed their low-achieving high-SES counterparts (60th versus 46th percentile), whereas the situation was reversed in 1992 (49th

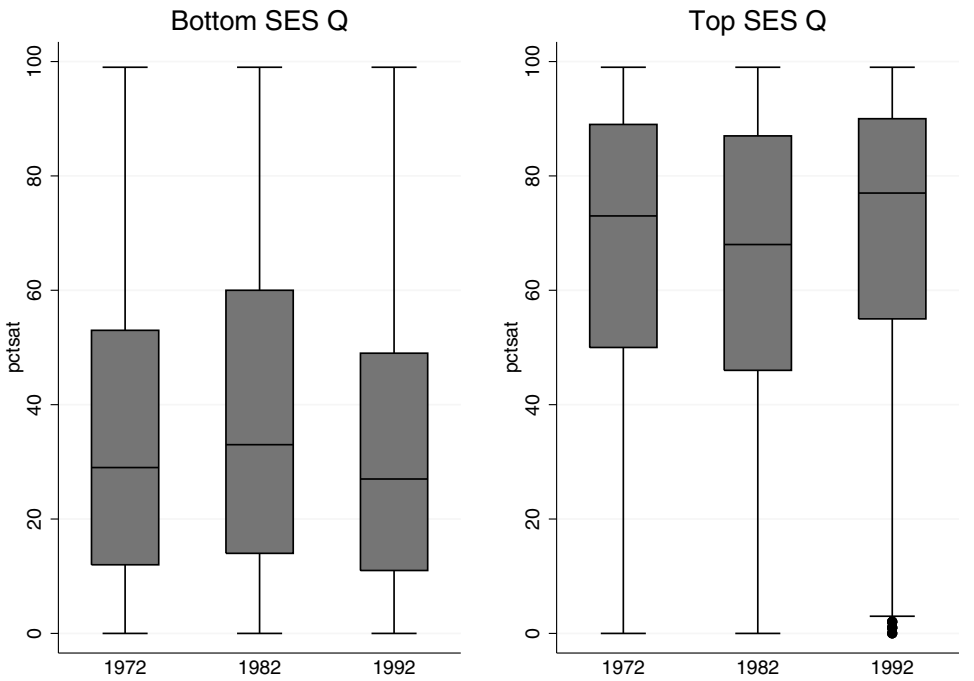
Table 3. Adjusted Class Gaps in College Destinations, Tests for Various Covariates; 1982 and 1992 High School Graduates, HSB and NELS Pooled Data, Multinomial Logistic Odds Ratios

	Base Category = No Postsecondary Education				
Year 1982 to 1992 Pooled Data (N = 25,808)	Two-Year	Four-Year Non-selective	Four-Year Selective	Four-Year More Selective	Pseudo R^2
Control: SAT scores					
Lowest SESQ	.408**	.271**	.172**	.099**	.13
Year 1992	1.410*	1.365	.550**	.968	
Lowest SESQ*year	.839	.890	.919	1.228	
Test scores (percentile)	1.010**	1.023**	1.033**	1.073**	
Scores*year	1.003	1.005	1.011**	1.017**	
Control: HS Class Rank					
Lowest SESQ	.338**	.174**	.095**	.034**	.13
Year 1992	1.351**	1.390*	.685**	3.407**	
Lowest SESQ*year	.762*	.729*	.625**	.645*	
Class rank (percentile)	1.013**	1.029**	1.035**	1.063**	
Rank*year	1.006**	1.007**	1.011**	1.003	
Control: Race/Ethnicity					
Lowest SESQ	.335**	.177**	.101**	.038**	.07
Year 1992	1.619**	1.753**	1.168	3.283**	
Lowest SESQ*year	.699**	.618**	.586**	.545**	
Black	1.016	1.434**	1.012	.995	
Black*year	.897	1.386**	.730*	.781	
Hispanic	1.159*	.824	.941	.777*	
Hispanic*year	1.265**	1.172	.833	1.097	
Asian	1.706**	.973	2.106**	4.909**	
Asian*year	1.321	1.793*	1.029	.870	
Control: Female					
Lowest SESQ	.334**	.178**	.096**	.036**	.06
Year 1992	1.734**	1.797**	1.181	3.332**	
Lowest SESQ*year	.729**	.652**	.551**	.535**	
Female	1.445**	1.351**	1.459**	1.152	
Female*year	.951	1.112	.982	1.095	
Control: Public HS					
Lowest SESQ	.368**	.199**	.117**	.045**	.07
Year 1992	1.649**	1.847**	1.127	3.838**	
Lowest SESQ*year	.729**	.664**	.561**	.601**	
Public HS	.631**	.537**	.368**	.283**	
Public*year	1.052	1.063	1.108	.883	
Control: Region					
Lowest SESQ	.357**	.181**	.099**	.034**	.07
Year 1992	1.738**	2.775**	.948	2.158**	
Lowest SESQ*year	.706**	.650**	.555**	.580**	
South	.952	2.347**	.618**	.217**	
South*year	1.038	.655**	1.271*	2.722**	
Midwest	1.075	2.451**	.848*	.273**	
Midwest*year	.836	.512**	1.503**	2.029**	
West	1.442**	.873	.722**	.445**	
West*year	1.084	1.030	1.118	1.602**	

Note: All models control for middle SES and its related interactions with the year dummies (results not shown).
* $p < .05$; ** $p < .01$ (two-tailed tests).

versus 55th percentile, respectively). Class-based polarization in test scores during the 1980s was due to the class-based bifurcation of the middle of the distribution. As a result, by 1992 we find very little overlap in the test score distributions of the two groups.[12] Such class-based polarization in test scores is no doubt a

[12] For instance, in 1992, 75 percent of low-SES seniors' test scores were below the 49th percentile,



	Bottom SES Quartile			Top SES Quartile		
	1972	1982	1992	1972	1982	1992
Average Percentile	35	38	32	68	65	70
25%	12	14	11	50	46	55
50%	29	33	27	73	68	77
75%	53	60	49	89	87	90

Figure 3. Overtime Change in the Percentile Distribution of Test Scores by SES Quartiles

Note: This plot portrays the central 50 percent of a distribution (interquartile range Q1 to Q3), from the lower to the upper quartile. The line within the box marks the median, and the lines below and above the box cover the entire range of values. Dots represent outliers.

key factor in enabling high-SES groups to expand both qualitative and quantitative advantages in postsecondary education.

The 1970s and 1980s also saw increased immigration from Latin America. This change in the demographic composition of the bottom socioeconomic echelons could explain low-SES high school graduates' drop in the test score distribution. However, this does not appear to be the case. Examining change in test scores over time by race/ethnicity reveals that both class-based convergence and polarization of the test score distribution were most pronounced among whites.[13] Further diagnosis reveals other changes, such as geographic distribution, in the profile of high school graduates between 1972 and 1992, but these changes do not vary by SES strata and thus cannot explain changes in the class divide (as is demonstrated in Tables 2 and 3). Taken together, these findings demonstrate that one of the dramatic changes in the 1970s and 1980s for the evolution of class inequality is the shift in the levels of test scores.

while over 75 percent of high-SES seniors' test scores were above this mark. About 25 percent of high-SES seniors had test scores above the 90th percentile, while only 1 percent of low-SES seniors reached this position in the distribution.

[13] Results not shown but are available on request.

This affected low- and high-SES seniors in opposite directions, resulting in class convergence during the 1970s followed by a polarization of test scores in the 1980s. In the following counterfactual analysis, I demonstrate the implications of the adaptation of the privileged to the heightened test score requirements for the growth of class inequality in higher education during the 1980s.

To consider temporal changes in the value of certain background characteristics in the admission process, I look back to the results in Tables 2 and 3. Between 1972 and 1982, the value of test scores in admissions declined at all college destinations (see estimates for scores*year). By contrast, the value that selective institutions placed on test scores in their admission decisions rose between 1982 and 1992 (Alon and Tienda 2007).[14] Further analysis (results not shown) reveals that the value of test scores do not vary by socioeconomic strata. This finding counters the notion that advantaged groups obtain superior rates of converting assets into higher educational attainment, compared with disadvantaged groups (Persell et al. 1992). Class gaps in college access are generated by groups' differential capability to keep pace with the rising test score thresholds for admission, not the growing socioeconomic disparities in the returns to test scores. This highlights the universalistic nature of closure rules (Parkin 1979)—all students face the same test barriers in admission.

These results accord with the theoretical framework developed in this study. When competition in admissions is low, as was the case during the 1970s, the importance of test scores for college admission diminishes. Relaxing admission barriers to colleges and universities portends greater inclusiveness of students from all walks of life, while also eliminating the need of the privileged to cope with a closure system. Narrowing of the class divide ensues. Given this benchmark, we cannot overstate the significance of the shifts that began in the mid-1980s. During this time, competition in admissions intensified because of increased demand for a college diploma, rising pressure for admittance to selective schools, and a growing awareness of stratification between schools. Selective colleges then placed greater emphasis on test scores to sort the flood of qualified applicants. In the face of this competition, the privileged adapted to the changing closure rules, resulting in a class-based polarization in test scores and a widening of the class divide regarding all college destinations.

WHO BENEFITS? WHO LOSES? COUNTERFACTUAL ANALYSIS OF EXCLUSION AND ADAPTATION

I illustrate the consequences of these exclusion and adaptation forces for the growing class inequality in postsecondary education since the mid-1980s. The main question is what would have been the college destination of low- (or high-) SES high school seniors from the 1992 cohort if test scores-related changes did not take place? To assess how the 1992 cohort would have fared under the 1982 test scores regime, I simulate their postsecondary destinations (1) if there were no class-based polarization in the level of test scores (i.e., no adaptation) and (2) if the value of test scores in admission remained stable over time (i.e., no exclusion). The key comparisons are temporal (i.e., within-class between-cohorts), comparing low-SES seniors at a certain position on the test score distribution in 1992 with their counterparts in 1982 (and high-SES in 1992 with high-SES in 1982). I use points on the group-specific distributions rather than equivalent values for both SES groups.[15]

I calculate predicted probabilities of attending each postsecondary destination in 1992 while holding all covariates, except test scores

[14] Since the mid-1980s, students' high school class rank became influential in generating access to postsecondary education but not in facilitating admittance to selective destinations (see Table 3).

[15] Because there is minimal overlap in test score distributions of low- and high-SES seniors, a comparison based on equivalent test scores is hypothetical and uninformative regarding the actual destinations of these seniors (Mare and Winship 1988). My strategy here provides a more realistic look at the postsecondary destinations for seniors across a range of test scores. Because the returns to test scores do not vary by social class, if low-SES high school graduates had the same test score level as their high-SES counterparts, they would have had a similar attendance pattern.

and SES, at their grand mean in 1992.[16] Because changes in test score level and value may differently affect low-, middle-, and high-achieving youth, the predictions are for low- and high-SES seniors who were in their group-specific 25th, 50th, and 75th percentiles of the test score distribution in 1992 (for top SES seniors this translates to the 55th, 77th, and 90th percentiles, respectively; for low-SES seniors it is the 11th, 27th, and 49th percentiles, respectively; see Figure 3). The basic set of predicted probabilities yield the destination of high- and low-SES high school graduates in 1992 with the average characteristics and a given level of test scores. I use this as a benchmark to compare the following counterfactual probabilities.

The first scenario examines the potential postsecondary destinations of 1992 students had there been no temporal change in the level of test scores (no adaptation). I recalculated the predicted probabilities for the 1992 cohort using the 1982 values of the group-specific 25th, 50th, and 75th percentiles (46, 68, and 87 for top SES seniors, respectively; 14, 33, and 60 for bottom SES seniors), while keeping the value of test scores in admission decisions at their actual 1992 level. The second scenario assesses the potential postsecondary destinations of top and bottom SES seniors if the value of test scores in admission decisions in 1992 had been the same as in 1982 (no exclusion), keeping the score levels as they were in 1992. To test this scenario, I re-fitted the model for the 1992 cohort while constraining the value of test scores to their 1982 level. By comparing these counterfactual probabilities with the actual postsecondary destinations (predicted without any constraint), I assess the gains or losses for each group from these temporal changes.

The results in Table 4 are for the top SES seniors. Among low-achieving top SES seniors (in the 25th percentile of test score distribution) with average characteristics, 11 percent attended a more selective institution in 1992, 25 percent attended a selective school, and 11 percent did not pursue postsecondary education. If their test scores had not risen between 1982 and 1992 (from the 46th to the 55th percentile), their shares would have dropped to 7 percent at the more selective schools and 23 percent at selective schools; the share without postsecondary education would have risen to 13 percent. Due to adaptation, this group of low-achieving privileged seniors gained 6 percentage points in terms of attendance at selective schools (see Table 4 for summary of gain/loss). Interestingly, the second scenario suggests that this group *lost* two percentage points due to higher test score barriers to admissions in 1992 at more selective institutions (11 versus 13 percent). Along with illustrating the universal nature of exclusion, this also highlights the dire need for low-achieving privileged youth to adapt to preserve the kinship link. The simulations demonstrate the remarkable adaptation of this group of relatively mediocre high school graduates to the elevated admission thresholds: their gains from adaptation exceed their losses due to exclusion. Overall, this group's situation in 1992 in terms of college destination was better than that of their counterparts in 1982.

An improved position in the test score distribution also helped high-SES seniors with median test scores move from less selective to more selective institutions (they gained 8 percentage points in terms of attendance at more selective schools). For them, as for those in the 25th percentile, the central development between 1982 and 1992 was the ability to adapt to the new test score barriers to admittance. High-SES seniors in the 75th percentile of their group's test score distribution were equally responsive to both temporal changes: they gained 4 percentage points in access to the most selective institutions due to their improved test scores, and 4 percentage points from the rise in the value of test scores at these institutions. Juxtaposing their experience with that of their counterparts with lower test scores, it is clear that the rising test score barriers at selective schools (exclusion) disproportionately benefited high-achieving privileged seniors: their academically mediocre counterparts had to improve their position in the test score distribution to gain access to selective college destinations.

For most high school graduates from the bottom SES quartile (see Table 5), four-year postsecondary education was not a realistic option in 1992; over 80 percent did not attend a four-year college or university. The simulation shows that this grim situation was, in part, due to tem-

[16] Given class disparities in the stock of these attributes, the following predictions may underestimate the class divide.

Table 4. Simulated College Destinations of 1992 High School Graduates, Top SES Quartile

Test Scores		College Destinations of Top SES Students, 1992				
Percentile	Level	No PSE	Two-Year	Non-selective	Selective	More Selective
		Actual (predicted without any constraint)				
25	55	.11	.38	.15	.25	.11
50	77	.06	.26	.13	.27	.28
75	90	.04	.18	.11	.25	.42
		Simulated 1982 level of test scores – 1992 value of test scores				
25	46	.13	.42	.15	.23	.07
50	68	.08	.31	.14	.27	.20
75	87	.05	.20	.12	.25	.38
		Simulated 1982 value of test scores – 1992 level of test scores				
25	55	.11	.37	.15	.25	.13
50	77	.07	.27	.13	.27	.27
75	90	.05	.21	.11	.25	.38
Gain/Loss Due to Adaptation (change in the level of test scores between 1982 and 1992)						
25		–.02	–.04	.00	.02	.04
50		–.02	–.05	–.01	.00	.08
75		.00	–.02	–.01	–.01	.04
Gain/Loss Due to Exclusion (change in the value of test scores between 1982 and 1992)						
25		.00	.01	.01	.00	–.02
50		.00	–.01	.00	.00	.01
75		.00	–.03	.00	–.01	.04

Note: All covariates (beside test scores) are held at their mean. PSE = postsecondary education.

poral changes in both the level and the value of test scores. Underprivileged youth located in their group's 75th percentile in 1992 lost more ground than their lower-achieving high-SES counterparts; their inability to keep pace with high-SES students' test scores capped their college opportunities. If they had maintained their 1982 relative position in the test score distribution, 26 percent might have attended a four-year institution, with 4 percent at a more selective school. However, the drastic plunge in the test score distribution that they experienced between 1982 and 1992 was detrimental: their share at four-year schools declined to 21 percent (only 2 percent at the more selective schools). An additional 4 percent were deterred from postsecondary education altogether, this during a decade that saw massive expansion of the postsecondary system. The rising admission barriers, and their inability to adjust to these barriers, discouraged about 10 percent of underprivileged seniors with low academic achievements from pursuing any type of postsecondary education. If students are regularly reminded that they are doing poor work, while others continually excel, "an appreciable fraction of losers will quit the game voluntarily" (Jencks and Riesman 1968:100). Overall, 15 percent of low-SES youth did not pursue postsecondary education in 1992 because they could not adapt to the increasing emphasis on test scores.

Taken together, the results of this counterfactual exercise reveal the depressing effect of academic-related changes on equality of educational opportunity. Privileged high school seniors benefited from the rising academic admission bar, but even more from their ability to get ahead in the test score distribution. For most of them, adaptation is more vital than exclusion in climbing the social hierarchy of U.S. higher education. Conversely, among high school graduates from the bottom socioeconomic strata, their failure to keep pace with

Table 5. Simulated College Destinations of 1992 High School Graduates, Bottom SES Quartile

Test Scores		College Destinations of Bottom SES Students, 1992				
		No PSE	Two-Year	Non-selective	Selective	More Selective
Percentile	Level					
		Actual (predicted without any constraint)				
25	11	.60	.33	.04	.03	.00
50	27	.46	.40	.07	.06	.01
75	49	.40	.40	.09	.10	.02
		Simulated 1982 level of test scores – 1992 value of test scores				
25	14	.50	.39	.06	.05	.00
50	33	.45	.40	.07	.07	.01
75	60	.36	.38	.10	.12	.04
		Simulated 1982 value of test scores – 1992 level of test scores				
25	11	.51	.38	.06	.05	.00
50	27	.46	.39	.07	.06	.01
75	49	.40	.40	.09	.09	.03
Gain/Loss Due to Adaptation (change in the level of test scores between 1982 and 1992)						
25		.10	–.06	–.02	–.02	.00
50		.02	.00	–.01	–.01	.00
75		.04	.01	–.01	–.02	–.02
Gain/Loss Due to Exclusion (change in the value of test scores between 1982 and 1992)						
25		.09	–.05	–.02	–.02	.00
50		.00	.01	.00	.00	.00
75		.00	.00	.00	.00	.00

Note: All covariates (beside test scores) are held at their mean. PSE = postsecondary education.

their privileged counterparts in the test scores race was detrimental to their college prospects, especially for those with the highest potential.

CONCLUSIONS

This study clearly shows that social class has a direct and persisting impact on enrollment and access to selective postsecondary schooling. Students from low socioeconomic strata were at a marked disadvantage in access to postsecondary education in all three cohorts, and this disadvantage increased with college selectivity. Yet the magnitude of class inequality is tightly bound to the level of competition in admissions. When the supply of seats surpasses demand, competition in admissions is low, admission barriers are relaxed, and the postsecondary system becomes more inclusive, especially at the lower rungs of the ladder. Consequently, inequality effectively declines. Conversely, increasing demand for a college diploma intensifies competition, which augments the value of test scores in the admission decisions of selective institutions. Adaptation of the privileged to the changing closure rules follows, creating a polarization of resources and amplifying the class divide for all postsecondary destinations. Inequality in higher education effectively expands.

The results reveal that the concept of adaptation is the cornerstone to building a comprehensive theory regarding the evolution of inequality. An especially meaningful aspect of adaptation is its unequal employment. All parents want their offspring to succeed in life, and as part of good parenting practices they are expected to invest in their children's education. From a societal perspective, however, it is troubling that only the privileged undertake the required behavioral adjustment to the rising admission demands, while others are unable to

follow suit. This underscores a crucial discrepancy between exclusion and adaptation that has serious ramifications for equality of opportunity. Closure rules are universal and class blind, as demonstrated by the evidence that low-achieving privileged youth also faced a loss with the erection of higher test-score barriers to admission. The fact that changes in admission barriers uniformly shape all groups' chances of admission curbs the potential bifurcation of the status hierarchy by exclusion.

Conversely, by assuring intergenerational transmission of status along kinship lines, adaptation is particularistic, sensitive to class differences, and thus unequal by default. Being attuned to the changing circumstances, the privileged devote considerable effort to cultivating their own stock of the currencies required for entry into lucrative positions. All privileged high school seniors benefited from this behavioral adjustment, and adaptation was more important than exclusion for their gravitation to the more selective institutions since the 1980s. The adaptation of the privileged, and the failure of the underprivileged to keep pace, creates a remarkable class-based polarization in the level of test scores, which, in turn, intensifies and expedites the formation of inequality. Exclusion may take ideological precedence over adaptation, as Parkin (1979) argues. In reality, however, as this study reveals, adaptation is a more effective mechanism for expanding class inequality in U.S. higher education.

By expanding the supply of high-scoring applicants, adaptation sparks a tightening of selection criteria, fuels exclusion, and artificially magnifies the competitiveness of the admission process. Likewise, Collins (1971) alludes to the agent role, manifested by behavioral adjustment to the rising credential demands, in generating closure in the labor market. He argues that the rise in educational requirements for labor market positions results from the increased supply of educated persons, not from new job performance demands of these positions. This, in turn, has resulted in more people seeking to acquire even higher educational credentials, fueling a continuous escalation in educational status.

The vicious cycle of adaptation and exclusion may explain the increasing weight granted to test scores in admission decisions since the mid-1980s, despite the fact that their predictive validity for future academic success is questionable. Evidence suggests that high school grade-point average is the best predictor of first-year college grades, while test scores provide a small increment to predictive validity (for further details, see the Online Supplement on the *ASR* Web site: http://www2.asanet.org/journals/asr/2009/toc071.html).[17] The inflated use of test scores in admission decisions since the mid-1980s derives, to a large extent, from admission officers' need to sort and rank surging waves of qualified applicants. It was not motivated by new academic performance demands but by gate-keeping intentions at times of competitive admissions. This cycle of adaptation and exclusion practices carry devastating implications for the ethos and operation of meritocracy in higher education, diverting it from being the great American equalizer.

Since the early 1990s, where this investigation ends, the underlying forces that led to the growing class inequality have mounted. The demand for a college education has reached new heights (see Figure 1), as has the college squeeze at selective schools.[18] Today, the vast majority of colleges not only demand test scores at the application stage—94 percent of four-year colleges and universities in 2006 (NACAC 2006)—they also value them more in making admission decisions. In 2005, 59 percent of institutions reported that they assigned "considerable importance" to test scores, a substantial rise from 46 percent in 1993 (NACAC 2006). Stratification in kind is emphasized more than ever before, and parents' anxiety about guaranteeing the best college placement for their offspring is mounting. Since the competition in higher education has been prolonged now for more than three decades, the pattern of effectively expanding inequality is likely to con-

[17] The Online Supplement summarizes the current research about the use of college admission tests. It also includes the original evidence on how well test scores predict college graduation for the cohorts analyzed in this study.

[18] In 2003, the most selective institutions in the United States—those that offer admission to fewer than 50 percent of applicants—received more than one fourth of the total four-year college application volume (NACAC 2006:11). More than 27,000 applicants competed for the 1,600 slots available at Harvard College in 2008; the admission rate was 7.7 percent.

tinue well after the turn of the twenty-first century.

So much is contingent on education—particularly access to secure, well-paying jobs—and expanding class inequality poses a threat to equality of educational opportunity. Notions that test scores block the educational opportunities of the underprivileged have nourished the momentum for going SAT-optional among liberal arts colleges, including some on the *U.S. News* list of top-100 institutions (FairTest 2009). Unfortunately, the insights marshaled in this study show that such a strategy falls short of equalizing opportunity. Providing that the demand for postsecondary education surpasses the supply of slots, exclusion of some sort will persist as institutions look to screen swelling applicant pools. Under such conditions, the covert process of adaptation will continue to promote the expansion of class inequality. Strides toward equal opportunity in higher education will only be made when the screening tool used in college admissions becomes impervious to training or preparation. This would limit the Pavlovian response of privileged parents and students to admission practices and curb the polarization of class-based resources. For a selection regime to be truly meritocratic, it must be universal in regard to both exclusion and adaptation. It is doubtful, however, whether any such adaptation-resistant instruments exist.

To broaden disadvantaged students' access to four-year and selective institutions, we must consider class-based affirmative action. To diversify their student bodies, selective institutions give underrepresented minorities an admission "boost" (Bowen and Bok 1998; Karabel 2005; NACAC 2006). However, following a need-blind admission rationale, most of these institutions do not give any preference to youth from the lower socioeconomic strata (Bowen et al. 2005; Golden 2006; McPherson and Schapiro 2006). Ironically, in an admission regime that considers legacies and parents' ability to donate to the institutions, this means blindness to applicants' backgrounds and special circumstances *only* if they are poor (and white). As Bowen and colleagues (2005:255) eloquently ask: "But are the claims of equity really being met today by a policy that gives no positive weight to having come from a poor family—and having somehow overcome all of the attendant barriers in order to compete with a candidate from a very different background for a place in class?" By offsetting the depressing effect of home disadvantages on test scores, an edge in admission to low-SES seniors will merely match the competitive advantages that accrue to the privileged through adaptation. Those most damaged by adaptation, talented underprivileged seniors, would benefit the most from a policy that cultivates dreams, aspirations, and ambitions for a type of education that is beyond reach without preferential treatment (Brown and Hirschman 2006; Card and Krueger 2005; M. Long 2004).

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APPENDIX

Table A1. Descriptive Statistics for High School Graduates: NLS, HS&B, and NELS Samples

Variable	Definition	Data: NLS 1972 College Entry Cohort: Mean	HS&B 1982 Mean	NELS 1992 Mean
College Destination				
Not Enrolled		34.0	37.0	25.4
Two-Year Open Door		30.0	30.2	35.0
Four-Year Non-selective		13.1	8.1	10.2
Four-Year Selective	md SAT 900–1050	16.4	18.6	16.2
Four-Year More Selective	md SAT above 1050	6.5	6.1	13.2
Grad6	Six-year graduation rate (for students attending four-year institutions)	.47	.56	.58
SES	Bottom socioeconomic status quartile	.24	.24	.22
	Top socioeconomic status quartile	.25	.26	.28
Test Scores	SAT/ACT score (percentile mean)	52.5	49.7	50.4
Class Rank	HS class rank (percentile mean)	49.6	48.9	51.0
White	White, not of Hispanic origin	.83	.78	.74
Black	Black, not of Hispanic origin	.09	.13	.12
Hispanic	Hispanic, regardless of race	.03	.08	.10
Asian	Asian or Pacific Islander	.01	.01	.05
Female	Female = 1, Male = 0	.50	.51	.51
Public	If attended a public high school	.88	.90	.86
Northeast	If home region in Northeast	.27	.23	.19
South	If home region in South	.28	.32	.34
Midwest	If home region in Midwest	.29	.28	.26
West	If home region in West	.17	.16	.19
N		22,652	12,716	13,093

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