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Transfer Access from Community Colleges and the Distribution of Elite Higher Education

This study investigates the contribution of community college transfers to the socio-economic diversity of elite colleges and universities. We find that elite institutions enroll few transfers and, among them, few are low-income students from community colleges. Transfer primarily serves middle- and high-income students as a route to elite institutions.

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<RRH>*Transfer Access to Elite Institutions*

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The admissions practices of the most highly selective colleges and universities of the United States are under scrutiny for their failure to enroll poor and working-class students (Douthat, 2005; Karabel, 2005; Klein, 2005). This negative attention has been spearheaded by findings reported in two important books examining the shortage of low-income students at the pinnacle of American higher education, *Equity and Excellence in Higher Education* by William Bowen, Martin Kurzweil, and Eugene Tobin (2005) and *America's Untapped Resource: Low-Income Students in Higher Education*, edited by Richard Kahlenberg (2004), as well as by research articles (e.g. Winston & Hill, 2005). In a chapter in the Kahlenberg text, for example, Carnevale and

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Rose reported that only 3% of freshmen entering 146 highly selective institutions in 1992 came from the lowest quartile of a socioeconomic status (SES) index and about 10% came from the entire bottom half of the SES distribution (2004, p. 106). Demonstrating a highly skewed distribution of access, nearly three fourths (74%) of students enrolled at these institutions come from the highest SES quartile.

Contributing further attention to the lack of socioeconomic diversity at elites, Thomas Mortenson of the Pell Institute for the Study of Opportunity in Higher Education began ranking prestigious schools according to their success or failure in enrolling financially needy students, as indicated by the proportion of the student body receiving federal Pell grants (Fischer, 2006a). The findings of these studies have been widely reported (see, for example, Fischer, 2006a; Gose, 2005; Hong, 2005; Selingo & Brainard, 2006), inspiring headlines such as “The chorus grows louder for class-based affirmative action” (Gose, 2005). The controversy raises substantial questions about the way in which valuable educational resources are distributed and the definitions of merit that prevail when elite institutions choose among numerous qualified candidates.

Family affluence clearly affects what type of college a student attends or whether they go to college at all. This is shown, for example, by differences in college participation by high- and low-income students with “medium-high preparedness”—in other words, those who are not at the top of their class but are well qualified for college. Only 3% of well-qualified students from high-income families did not attend college, in comparison to 13% of those from low-income families. Well-qualified students from high-income families were also much more likely to attend a high-priced college than were their low-income peers (52% vs. 20%) (Hoxby, 2000, cited in Bowen et al., 2005, p. 87).

Socioeconomic inequalities in college enrollments raise troubling issues for education in a democratic society. Providing students with the opportunity to enroll at a college appropriate for their level of academic ability, regardless of family circumstances, is a cornerstone of higher education policy (Bowen et al., 2005; Kahlenberg, 2004; St. John, 2003). Maintaining this commitment has become more challenging as per capita government funding for college operating subsidies and low-income student aid has declined (Archibald & Feldman, 2006; *Trends in Student Aid*, 2006; Weerts & Ronca, 2006). As the returns to a college degree have increased, so has demand (*Education Pays*, 2006), particularly for spots at highly selective colleges, whose graduates enjoy an even higher earnings premium than others (Eide, Brewer, & Ehrenberg, 1998). Students at elite colleges enjoy additional benefits as well, including a greater likelihood of degree completion and greater access to

graduate and professional study (Carnevale & Rose, 2004). These benefits have spawned intense competition for enrollment at highly selective colleges, and the recent increases in socioeconomic inequities in access (Astin & Oseguera, 2004) suggest that upper-income students have successfully utilized their numerous advantages to win this competition.

Partly because attendance substantially increases one's chances for later success, elite institutions are important symbols of power and prestige. As a result, the representation of lower socioeconomic status and racial-ethnic minority students at all levels of postsecondary education becomes a marker of a fair and just educational system in a multicultural democracy. As Sullivan has observed, the rags-to-riches story of social mobility through hard work and self-improvement is the "archetypal American cultural narrative" (2005, p. 142). Substantial intergenerational mobility becomes more difficult when an important determinant of social position and earnings, attendance at a selective higher education institution, appears to be the near exclusive domain of more affluent groups (Labaree, 1997).

Furthermore, many are concerned that when elite colleges lack socio-cultural diversity, society loses the benefits of diverse perspectives among its civic and business leaders (Bowen et al., 2005; Hurtado, 2007; Kahlenberg, 2004). The exclusion of poor, working-class, and racial-ethnic minority students from elite institutions reduces the probability that these students will enter positions of power in society. It also decreases the likelihood that graduates of elite institutions will interact with a diverse set of peers while in college.

The strength of empirical evidence showing the benefits of student body diversity at selective institutions were influential in the recent Supreme Court decisions upholding certain forms of affirmative action in admissions at the University of Michigan (Hurtado, 2007; Joint Statement of Constitutional Law Scholars, 2003). Studies of the effects of interactions in diverse student groups have indicated that, controlling statistically for incoming student predispositions and characteristics, positive interactions are "associated with increases in students' democratic sensibilities including their pluralistic orientation, interest in poverty issues, and concern for the public good" (Hurtado, 2007, p. 191). Such awareness is viewed as necessary for citizenship in a pluralistic democracy and for the production of "leadership with greater social awareness and the complex thinking skills to alleviate social problems related to the complexities of inequality" (p. 193).

Informed by these perspectives, the agenda to reduce socioeconomic inequalities in access to elite institutions supports the larger goals of increasing social mobility, improving democratic participation, and promoting the civic ideals of equal treatment and opportunity.

Responses to the SES Enrollment Gap

The research findings demonstrating a large socioeconomic enrollment gap support the contention that elite colleges must cast their nets wider in recruiting academically capable students of modest family means. Three high-profile responses—one designed to reduce economic barriers to elite college enrollment, another to provide class-based affirmative action, and the last intended to increase transfer access—have emerged in the face of these pressures to increase socioeconomic diversity. The first, which comes from a relatively small group of affluent institutions that have announced full or significantly increased institutional aid to cover costs for low-income students at their schools (Fischer, 2006a; Wasley, 2006), is not likely to have a broad reach because only the most well-endowed institutions have the financial resources to make such a commitment.

Another limitation of this response stems from the fact that lowering costs without revising admissions practices does not necessarily lead to a significant increase in low-income student enrollment. Changes in enrollment at the University of Virginia after adoption of the “AccessUVa” program illustrate this point. Although the program essentially covers all direct costs for low-income students—removing requirements to work or take loans, as well as providing money for extra expenses—only 6% of the student body was able to take advantage of the offer in the 2005–06 academic year, and university officials reported that they expected incremental annual enrollment growth among low-income students of only 0.5% (Fischer, 2006b).

The small potential impact of “no loans” financial aid policies (and others that provide complete funding for low-income students) results from the strong correlation between income and SAT scores. In comparison to their wealthy counterparts, only a small number of poor students make it into what Bowen et al. (2005) described as the “credible applicant pool” of elite colleges. Well over half (58%) of top SAT exam scorers (i.e., those scoring above 1200) from the high school class of 1992 were students from the highest SES quartile. In comparison, a mere 4% of students from the lowest quartile achieved such high scores (Carnevale & Rose, 2004, p. 130).

In addition, even those low-income students who earn high SAT scores are frequently overlooked by elite colleges. Despite glaring socioeconomic inequities in their enrollments, approximately half of the low-income applicants with SAT scores between 1350 and 1400 in Bowen et al.’s study of 19 highly selective institutions were rejected for admission (2005, p. 181). Under need-blind admissions policies, institutions aim to demonstrate that they do not discriminate against students with financial

need, but they do not take affirmative steps to enroll low-income students when applications are reviewed. Consequently, several observers have argued that elite colleges should do more to enroll poor and working-class students through the adoption of class-based affirmative action (Bowen et al., 2005; Carnevale & Rose, 2004; Kahlenberg, 2004).

Bowen et al. (2005) argued that elite colleges should place a “thumb on the scale” in favor of low-income families. They explored the implications of weighting that “thumb” in such a way as to provide an advantage equal to that accorded “legacy” students (children of alumni). They found that by doing so the colleges in their sample could increase the share of low-income students from 11% to 17% (p. 179). Similarly, Carnevale and Rose (2004) simulated the share of low-income students at the 146 elite colleges in their study who would be enrolled under a number of alternative admissions policies, including those that currently prevail, which are largely neutral in their treatment of income status. Exploring the advantages and disadvantages of class rank plans, selection from among all qualified students by lottery, and economic affirmative action, they argued that the latter provided for the most equitable outcomes and was politically feasible. Through simulation of their plan, which focused on outreach to students with SAT scores between 1000 and 1300, high school GPAs above 3.0, excellent recommendations, and a strong showing in extracurricular activities, they showed that the percentage of students from the lower two SES quartiles can be increased from 10% to 38% (p. 149). While class-based affirmative action policies do show promise, they face several obstacles. Such plans can be perceived as supplanting race-based affirmative action, even when proponents argue for both. Furthermore, institutions may not embrace such policies, fearing that the proposed admissions criteria will have a negative impact on their *U.S. News* rankings (by lowering SAT scores).

The third response to socioeconomic inequities in elite college enrollment, which is the subject of this study, calls for a fundamental reorientation of admissions policies and practices. Based on the assumption that a pool of academically able low-income students is going untapped, it involves increasing the number of students transferring from community colleges to elite colleges (Burdman, 2003; Capriccioso, 2006; Padgett, 2004; Wyner, 2006). At the institutional level, such efforts have been spearheaded by the Jack Kent Cooke Foundation’s Community College Transfer Initiative (Wyner, 2006), which has stimulated the investment of nearly \$50 million by the foundation and its partner institutions to institute new transfer programs (Kattner, 2006). At the state and federal level, transfer from community to four-year colleges has gained attention as a potentially cost-effective way to increase bachelor’s

degree attainment, not only for the poor but also for middle-class families feeling squeezed by rising college costs (Keller, 2007; U.S. Department of Education, 2006; Walters, 2006).

A longstanding policy debate, still unsettled, concerns whether community colleges democratize higher education by providing low-cost access or divert students from bachelor's degrees that they would otherwise attain if they began their studies at a four-year college (Brint & Karabel, 1989; Dougherty, 1994; Melguizo & Dowd, in press). As college enrollments become more stratified by socioeconomic status (Astin & Oseguera, 2004), the equity implications of policies that rely on transfer to efficiently provide access to the baccalaureate deserve additional scrutiny (Dowd, 2003). Competition for transfer access is likely to increase as states implement stricter four-year college admission standards (Boswell, 2004; Long, 2005). Theories of social reproduction and class conflict suggest that poor and working-class students are unlikely to prevail in an intensified struggle for educational resources that ensure upward mobility (Bourdieu, 1986; Labaree, 1997).

Purpose of the Study

This study improves our understanding of the potential impact of expanded community college transfer access to elite institutions by examining a variety of key questions using two national databases with complementary strengths. We start by estimating the number of low-income students that transfer to elite institutions from community colleges. This number is the product of answers to three questions: (1) To what extent are elite institutions currently enrolling transfer students? (2) Of those transfers, how many admitted are from community colleges? (3) Of those community college transfers, how many are from low-income family backgrounds? We answer each of these questions for elite institutions and also provide the corresponding estimates for less selective institutions for comparison. We then estimate the total number of two-year transfers at elite institutions to understand the contribution of community college transfer access in reducing the underrepresentation of low-income students at these institutions.

Our findings clearly demonstrate that elite institutions currently enroll very few community college transfers. Consequently, we investigate possible explanations for why these numbers are so low. Our examination centers on two broad questions. First, do community college transfers have the academic preparation required to succeed at highly selective institutions? To answer this question, the academic preparation of community college students is compared with that of students who enrolled directly in highly selective colleges as first-time freshmen. Sec-

ond, to what extent do highly selective institutions possess characteristics, such as high attrition, that are associated with greater institutional demand for transfer students at four-year institutions? In addition to answering this question, we also investigate whether the effects of these characteristics on transfer enrollment differ between highly selective and less selective colleges.

Prior Research

To our knowledge, this study is unique in its comprehensive investigation of community college student transfer to elite institutions through analysis of two nationally representative databases. Other studies have examined collaborative relationships between elite institutions and community colleges through case study research and qualitative data analysis (Gabbard et al., 2006; Laanan, 1996; Morphew, Twombly, & Wolf-Wendel, 2001) or conducted analyses of transfer to selective and less selective colleges in individual states (Burdman, 2003; Romano, 2005; Townsend & Wilson, 2006; Wassmer, 2003) or from particular community colleges (Bers, 2002). Cheslock (2005; Dowd & Cheslock, 2006) has shown that transfer to elite private colleges and universities is at a historic low point.

By estimating the number of low-income community college students currently transferring to highly selective institutions, this study demonstrates that elite institutions are not currently utilizing the transfer route to substantially increase the representation of low-income students on their campuses. In addition, by examining the influence of student academic preparedness and the effects of institutional characteristics on transfer enrollment rates at elite institutions, this study helps specify the nature of the problem of low transfer access. Although earlier research has described the socioeconomic inequity of the distribution of elite education and the lack of students from poor and working-class backgrounds among the entering freshmen classes of the most prestigious institutions in the United States, this study fills a gap in the literature by examining the socioeconomic distribution of transfer access to elite higher education.

This article is organized into five sections including this introduction. The second section presents the conceptual framework, which draws on three perspectives informing this issue: policy perspectives concerning the equity and efficiency of education; philosophical perspectives considering the legitimate criteria for admissions to elite higher education in a democracy; and institutional fiscal perspectives that influence admissions and enrollment management decisions. The third section describes the data analyzed. The fourth section describes the methods and

results of the analyses, and the results are also compared to the findings of prior studies. The final section summarizes the major conclusions of the study and considers their implications.

Conceptual Framework

Policy Perspectives: Equity and Efficiency of Education

Arguments to facilitate transfer from community colleges to elite institutions reflect concerns for educational equity and efficiency and emphasize four points. First, the distribution of quality secondary schooling is highly inequitable. For example, students from the lowest SES quintile are more likely to attend schools that do not offer advanced mathematics courses (Adelman, 2006). Many students from poor families might well have been able to gain acceptance to and succeed at elite institutions if given proper instruction and encouragement during their schooling. That lost opportunity to learn can be provided by community colleges, which focus on teaching to a greater extent than research universities and which pride themselves on being learner-centered institutions (O'Banion, 1997). Second, the number of academically prepared high school graduates who choose to start at community colleges for financial, educational, or family reasons is believed to be getting larger (Adelman, 2005; Bailey, Jenkins, & Leinbach, 2005), increasing the pool of students qualified for successful degree completion at elite institutions. Third, population growth and increased enrollment demand have stressed higher education capacity in many states. As a result, even academically successful high school graduates fail to gain entry to public colleges with competitive admissions. The education of many more students in lower-cost community colleges is efficient and desirable from the standpoint of legislatures facing structural budget deficits. However, the rationing of access to elite institutions undermines educational equity if there is no opportunity for upward mobility through a stratified educational system (Labaree, 1997).

Finally, the number of low-income students concentrated in community colleges is large and provides a ready pool of potential transfers who, by earning a bachelor's degree, would increase their own human capital, contribute to closing the socioeconomic enrollment gap in higher education, and increase overall educational attainment in the United States. Over 6 million students enrolled at community colleges during the fall 2001 semester (Phillippe & González Sullivan, 2005, p. 12). Among them were approximately 1.7 million full-time students 18 to 24 years old (p. 34), the traditional college-age group most often

served by elite institutions. Recent estimates indicate that 48% of community college students who were financially dependent on their parents were from the lower half of the income distribution (less than \$50,000 in 2003) (p. 54). Together, these statistics suggest the presence of over 800,000 students from the bottom half of the income distribution, the very segment of the population that is absent from elite institutions. While not all of these 800,000 students would be qualified for enrollment at a highly selective college, the estimate gives a sense of the population of students who are the focus of debate regarding transfer access to elite higher education.

The size of the low-income student population in community colleges is very large relative to the number of low-income students missing from elite institutions. Comparative estimates are available. Carnevale and Rose (2004) estimated that for the 170,000 high school graduates who entered their sample of 146 elite institutions in 1992, 17,000 (10%) were from the lower half of the SES distribution. Researchers have sought to give a sense of the magnitude of the underrepresentation of low-SES students by comparing existing enrollments to the SES population distribution. Carnevale and Rose pointed out that if the representation of this group were proportional at 50%, an additional 68,000 low-income students would have enrolled (to reach the proportional number of 85,000). Similarly, Winston and Hill (2005) estimated that at the 28 private institutions that are members of the Consortium on Financing Higher Education (COFHE), the number of low-income students would have to almost double, from 2,750 students matriculated in 2001–2002 (10% of the entering class) to 5,005 students annually, in order to reach a socioeconomic distribution proportional to the national population.

Philosophical Perspectives: Legitimate Admissions Criteria

Nonselective and selective institutions have distinct “primary democratic purposes” (Gutmann, 1987, p. 194). Places at selective institutions, which are responsible for educating political officeholders and professionals, are scarce and valuable social goods. Therefore admissions committees cannot “arbitrarily” exercise “unconstrained preferences” in deciding whom to admit and exclude (Gutmann, 1987, p. 196). In distributing scarce spaces at elite institutions, admissions committees should be held, Gutmann argues, to the principle of nondiscrimination, which creates two main tenets for judging admissions criteria: (a) the desired qualifications must be “relevant to the legitimate purpose” of the institution, and (b) “all applicants who qualify or satisfy those standards should be given equal consideration for admission” (p. 196).

The application of these principles becomes difficult when the legitimate purposes of the university are in conflict in determining admissions criteria. As places of free academic inquiry, universities also have “associational freedom” to select members who share intellectual and educational values (p. 185). This interest in establishing communal standards and a certain type of communal life may place higher value on certain student qualifications than others. The qualifications preferred for associational purposes often appear to conflict with the institution’s equal consideration of students’ academic qualifications, because some academically qualified students are inevitably excluded on the grounds of associational freedom.

Gutmann argues that admissions standards set to establish the quality of communal life should be subordinate to academic qualifications because elite institutions function as a gatekeeper to important political, civil, and professional offices (1987, p. 202). Therefore, universities “should be constrained to consider academic ability as a necessary or primary qualification for admission, yet free to consider as additional qualifications nonacademic characteristics that are relevant to their social purposes” (p. 202). The tension between the communal goals and the role of gatekeeper, in which institutions serve society, is exacerbated by the difficulty of measuring academic ability or other important qualities, such as “intellectual creativity, honesty, aesthetic sensibility, perseverance, motivation to help others, leadership” (p. 200). Academic ability and a person’s “character” are both difficult to judge. (For other philosophical and political-economic discussions concerning the allocation of educational opportunity, see Howe, 1997; Klitgaard, 1985; McPherson & Schapiro, 1990; Rawls, 1993).

These tensions are clearly recognizable in the conflicts an admissions committee faces when evaluating the applications of community college transfer students. Gutmann’s principles indicate that the activities and policies that build college communities, student classes, and cohorts within programs and majors—such as residence life requirements, orientation activities, and major field of study prerequisites—are indeed important and in some ways constitute socialization experiences with core educational value. However, a college’s general education requirements and cohort-based educational programming do not in themselves trump the right of qualified transfer applicants to receive equal consideration of their academic merits. This follows even if the admission of transfer students, who by definition begin college elsewhere and do not experience the same communal activities as entering freshmen, is perceived as diminishing a strong residential or communal culture.

Fiscal Perspectives: Enrollment Management and Institutional Prestige

The enrollment of low-income transfer students can have several financial implications for an institution. While any low-income student will depress net tuition revenue more than an upper-income student because of the required need-based institutional aid, low-income transfer students may have less of an effect than low-income freshmen if they transfer in a substantial number of credits. The institution may annually allocate less financial aid because transfers will have lower total educational costs as a result of their initial attendance at a lower-priced college. In addition, for “on time” graduates, financial aid need only be offered for two years to transfers as opposed to four years for freshman entrants. Regardless of the student’s family income, transfer students can have very different cost implications than students admitted as freshmen. If substantial excess capacity exists in upper-level courses, institutions may actually enroll transfers at a savings, because they are simply filling capacity that would otherwise go unused. In the absence of such capacity, however, transfer students may actually be more costly than freshman admissions, because they spend a larger share of their time in upper-level courses, which are more expensive (Cheslock, 2005).

College and universities are also driven by prestige considerations that affect institutional economics (Garvin, 1980). The impact of transfer enrollment on institutional status is ambiguous. On one hand, some may view admitted transfers as less academically qualified and their admission as a sign of lower status (Gabbard et al., 2006; Manzo, 2004). But transfer enrollment could also serve to improve prestige, due to a “blind spot” in the formulas used in many influential publications, such as the *U.S. News and World Report*, which rank higher education institutions on indicators of selectivity. These rankings are derived from institutional freshman admission rates and on the average standardized test scores of the freshman class. The fact that transfer students are typically omitted from the ranking formulas provides an opportunity for colleges to strategically decrease the size of their freshman class and replace the lost enrollment with transfer students. This would have the effect of decreasing the admissions rate and increasing the average SAT or ACT scores, both of which would lead to higher rankings and signal higher status.

Summary

The three perspectives informing our conceptual framework—policy, philosophical, and fiscal—are interrelated. Given that demand for an elite education outstrips the supply of spaces, the policy perspective

argues that moving more students from community colleges to selective institutions makes a lot of sense. The inequities in precollege educational opportunities and the rising costs of college have pushed students with high academic potential to begin at community colleges, even when the two-year sector is not their first choice. As many of these students are from the lower-half of the income distribution, promoting transfer access can help alleviate the severe underrepresentation of low-income students at elite institutions and potentially can do so at a lower cost than through freshman admissions.

Gutmann's (1987) philosophical discussions of the characteristics of a legitimate admissions system in a democratic society provide a framework to argue that these potential community college transfers should, indeed, be given equal consideration for admission. Finally, the fiscal perspective emphasizes the fact that colleges face financial and prestige considerations that will deter them from enrolling community college transfers. However, that will not always be the case, as transfers can fill unused upper-level class space and, by providing increased flexibility in "crafting a class" for freshman admission, even help an institution improve its rankings in popular college guides.

Data

This study takes advantage of the strengths of two national surveys to analyze institutional- and student-level data and presents a comprehensive profile of the prevalence and predictors of transfer admissions to selective institutions in the United States, accompanied by comparative information concerning transfer to less-selective institutions. The 2003 Annual Survey of Colleges and Universities from the College Board, which is an institutional-level census sample of all colleges and universities in the United States, includes the number of transfer students admitted from two-year and four-year colleges at four-year institutions in fall 2002.¹

Highly selective institutions are defined as those ranked as "most" or "highly" competitive in the *Barron's Profile of American Colleges* 2003 or 2005 editions and are referred to as "selective" or "elite" colleges,² where the latter expression is in a generic manner inclusive of both colleges and universities. Taking account of fluidity in the rankings and allowing elite status to be defined by a most or highly competitive ranking in one of these two years creates a larger group of elite institutions—179 cases compared to the 146 examined by Carnevale and Rose (2004)—than those included in previous studies.³ The estimates of transfer enrollment at institutions of lesser selectivity are based on all the other

institutions with valid data for the variables included in the analyses.⁴ The final analytic sample includes 892 less selective institutions.

The Department of Education's National Educational Longitudinal Study (NELS:88/2000), which is a nationally representative sample of the graduating high school class of 1992, is analyzed to obtain estimates of the proportion of low-income students among transfers to four-year colleges.⁵ In addition, the precollege academic preparedness of community college transfer students is compared to that of four-year college transfers and direct entrants to selective colleges. Following Adelman (2005), community college transfer students are defined as those who (a) begin in a community college, (b) earn more than 10 credits that count toward a degree at the community college before attending a four-year college, and (c) subsequently earn more than 10 credits from four-year colleges.⁶ Four-year college transfers are defined in an analogous manner, based on the completion of 10 credits at one four-year college prior to transfer to another. The sample is limited to early or on-time high school graduates and is representative of traditional-age college entrants. The affluence of a student's family is represented by a socioeconomic status (SES) index provided by the National Center for Education Statistics (NCES).⁷ Students whose SES index scores fall in the two lowest quintiles of the distribution are referred to as "low-SES" and "low-income" students.

Analyses

Prevalence of Community College Transfers at Elites

The share of transfer students in a four-year college's entering class differs considerably by institutional selectivity and type. As shown in Table 1, typical (median) two-year and four-year combined transfer enrollment shares at selective institutions are 24% in the public sector, 8% among the private non-liberal arts colleges, and 4% at liberal arts colleges. These shares rise by slightly less than half to 33% in the less selective public sector and triple at less selective private universities (26%) and liberal arts colleges (12%), indicating that transfer is much more prevalent at less selective institutions, particularly among private institutions.

In addition to enrolling smaller shares of transfers overall, private selective institutions also have a strong preference for four-year versus two-year transfers. The median share of two-year students among transfers, only 20% at private universities and 12% at private liberal arts colleges, clearly demonstrates that community college students are in the minority among transfers at elite private institutions. The corresponding figures for less selective privates are much higher at 53% and 43%,

TABLE 1
Enrollment Figures, Fall 2002^{a, b}

	Public			Privates, Non-Liberal Arts			Privates, Liberal Arts					
	Mean	25th	Med.	75th	Mean	25th	Med.	75th	Mean	25th	Med.	75th
<i>Selective institutions^c</i>												
# Freshmen enrolled	3067	1191	3274	4235	1411	751	1104	1685	459	342	454	573
# Transfers enrolled	999	227	891	1603	186	36	84	229	24	10	20	33
# 2-yr transfers enrolled	657	121	371	1209	80	2	14	86	6	0	2	7
# 4-yr transfers enrolled	342	97	213	443	106	24	52	134	19	8	15	23
% Incoming students, transfers	24%	15%	24%	28%	10%	4%	8%	13%	6%	2%	4%	9%
% Transfers, 2-yr	58%	43%	57%	77%	27%	10%	20%	42%	18%	0%	12%	25%
% Incoming students, 2-yr transfers	16%	7%	14%	23%	4%	0%	1%	5%	1%	0%	0%	2%
N	28				48				70			
<i>Less-selective institutions</i>												
# Freshmen enrolled	1658	674	1327	2331	401	186	317	513	319	201	308	440
# Transfers enrolled	887	354	724	1233	149	61	97	170	47	26	44	58
# 2-yr transfers enrolled	564	176	402	761	81	26	49	92	23	8	18	31
# 4-yr transfers enrolled	323	118	243	439	68	27	45	74	24	14	21	31
% Incoming students, transfers	35%	25%	33%	44%	29%	15%	26%	39%	15%	8%	12%	18%
% Transfers, 2-yr	60%	46%	61%	74%	52%	38%	53%	65%	45%	30%	43%	60
% Incoming students, 2-yr transfers	22%	13%	20%	30%	16%	7%	13%	22%	8%	3%	5%	11%
N	267				431				95			

^aSource: Analysis of the Annual Survey of Colleges of the College Board and Database, 2003–2004. Copyright 2003 College Entrance Examination Board. All rights reserved.

^b25th denotes the 25th percentile, Med. denotes the 50th percentile (i.e., median), and 75th denotes the 75th percentile.

^cSelective institutions are those ranked as most or highly competitive in the 2003 or 2005 *Barron's Profiles of American Colleges*.

respectively. This preference for four-year transfers is not discernible among the public elites, where at the median 57% of transfers are from two-year colleges, quite similar to the 61% observed for less selective publics.

At private selective institutions, the combination of low overall transfer enrollments and a preference for four-year-college transfers results in an extremely low number of two-year transfers. The median enrollment numbers are two students at elite private liberal arts colleges and 14 students at other elite privates (only 1% or less of new students entering in the fall semester in both cases).⁸ The corresponding figures at public selective institutions are higher, a 14% enrollment share and a median two-year transfer enrollment of 371, but they are still small given the emphasis on community colleges as an access point to the baccalaureate.

Prevalence of Low-Income Community College Transfers at Elites

Based on analyses of the NELS data, the disaggregated SES distribution of two-year transfer, four-year transfer, and direct entry students to selective and less selective four-year institutions are shown in Table 2.⁹ At selective institutions, approximately 7% of two-year transfers, 5% of four-year transfers, and 8% of direct entrants are from low-SES backgrounds, based on the combined enrollment shares from the two lowest quintiles (i.e., summing the bottom two quintile values in Table 2). The representation of poor and working-class students in the elite college student body is extremely small in all three groups of students. In contrast, the enrollment share of students from the highest SES quintile is 51% among two-year transfers, 71% among four-year transfers, and 65% among direct entrants, a significant overrepresentation in every group beyond the 20% expected for one quintile.

The community college transfer route appears to be a comparatively advantageous pathway to elite institutions for middle-income students. The shares of the second and third SES quintiles are 1.5 times larger (43% vs. 27%) among two-year transfers than direct entrants.¹⁰ In contrast, transfer from four-year colleges to elites does not provide an enrollment boost for middle-income students. Their shares are essentially the same as those for middle-income direct entrants. The distribution of four-year transfers to elites is highly skewed in favor of affluent students in the highest quintile.

At less selective four-year colleges and universities, the low-SES share increases but is still far below proportional representation. For community college transfers, the combined share of the lowest SES

TABLE 2

Community college transfers, four-year college transfers and direct attendees at selective and less selective institutions, by socioeconomic status^{a, b, c}

	Community college transfer students ^d		Four-year college transfer students ^e		Direct attendees ^f	
	Selective	Less selective	Selective	Less selective	Selective	Less selective
Highest	0.51 (0.10)	0.27 (0.03)	0.71 (0.04)	0.44 (0.03)	0.65 (0.04)	0.33 (0.02)
Second quintile	0.28 (0.09)	0.29 (0.03)	0.17 (0.03)	0.27 (0.02)	0.18 (0.03)	0.28 (0.02)
Third quintile	0.15 (0.05)	0.22 (0.02)	0.07 (0.02)	0.15 (0.02)	0.09 (0.02)	0.20 (0.01)
Fourth quintile	0.05 (0.02)	0.16 (0.02)	0.03 (0.01)	0.10 (0.02)	0.05 (0.01)	0.14 (0.01)
Lowest quintile	0.02 (0.01)	0.06 (0.01)	0.02 (0.01)	0.04 (0.01)	0.03 (0.02)	0.06 (0.01)
N	100	780	400	790	670	1,740
Total	29,070	203,200	82,230	174,470	119,170	393,440

^aSource: Analysis of the National Education Longitudinal Study of 1988/2000 (NCES 2003–402).

^bProportions and standard errors (in parentheses) are reported. Weighted Ns reported for all with known first institution of attendance. Flags and weights: For the 1992 senior sample the g12cohort flag was used with a correction suggested by Adelman. The weight is F4F2P2WT.

^cSelective institutions are those ranked as most or highly competitive in the 2003 or 2005 *Barron's Profile of American Colleges*.

^dA community college transfer is defined as a student who first attends a community college, earns more than 10 credits that count towards a degree at the community college before attending a four-year college, and subsequently earns more than 10 credits from the four-year college.

^eA four-year college transfer is defined as a student who first attends a four-year institution, earns at least 10 credits there, and subsequently transfers to a four-year institution.

^fA direct attendee is defined as a student who first attends a four-year institution, earns more than 10 credits there, and does not subsequently transfer to either a two-year or a four-year institution by the time of the last follow up.

quintiles rises from 7% at selective colleges to 22% at less selective institutions. This rise does not indicate that the community college transfer route is substantially more effective than other routes at enhancing socioeconomic diversity at less selective institutions. The share of students from the bottom two SES quintiles is only 2 percentage points lower (20% vs. 22%) for direct entrants than for community college transfers. As is the case for the more selective institutions, the greatest stratification by SES still occurs among four-year transfers, not surprising given the costs associated with transfer among four-year institutions. In total, these results show that low-income students have very poor transfer access to the baccalaureate, especially at the most selective institutions. Transfer serves primarily middle- and high-income students, and the most affluent students have the greatest opportunities for transfer.

Population Estimates of Community College Transfers at Elites

Population estimates based on the College Board data show that the total number of two-year transfers at elites is quite small: 22,691 at the 38 elite public universities, 4,227 at the 65 elite private universities, and 424 at the 76 elite private liberal arts colleges, for a total of 27,343.¹¹ By multiplying these population estimates by the proportion of low-income two-year transfers at elites (7%, as shown in the previous section), we obtain the following population estimates of low-income two-year transfers entering elite institutions in the fall of 2002: 1588 at public universities, 296 at private universities, and 30 at private colleges, for a total of 1,914.¹² The ratio of these 1,914 low-income two-year transfers and our estimated total of entering freshmen and transfers (293,803) indicates that nationally fewer than 1 in 1,000 (.0065) of the students entering elite institutions each year are low-income community college transfers.

These figures become even more striking when we limit our analysis to the sample of COFHE institutions that were the subject of prior studies of the number of low-income students at elites (e.g., Winston & Hill, 2005). These schools enroll only 287 two-year transfer students in total, and 21 of 31 schools enroll five two-year transfers or fewer. Given the 7% low-income enrollment share presented above, these figures suggest that COFHE institutions enrolled only 20 low-income community college transfers in their fall 2002 entering classes.

The magnitude of 1,914 low-income community college transfers among the entering class of elite institutions can be placed in context by Carnevale and Rose's (2004) finding that, based on the numbers expected under a proportional SES distribution, 68,000 low-income students were missing from elite college campuses. For elite institutions to achieve proportional SES enrollment strictly through community college transfer enrollment, the size of the low-income community college transfer population would need to increase enormously, by a factor of 34. Not even a hundredfold increase in the numbers of low-income community college transfers at COFHE institutions would fill the enrollment gap of 2,255 low-income students estimated by Winston and Hill (2005). These numbers clearly demonstrate the magnitude of the underrepresentation of low-income students at elite institutions and the substantial changes in transfer recruitment and admissions that would be required for those practices to contribute to socioeconomic enrollment equity at elite institutions.

Academic Preparation of Community College Transfer Students

One potential reason why elite institutions prefer transfers from four-year colleges over those from two-year colleges is differences in the academic preparation levels of the two groups. Analysis of NELS data does suggest that four-year transfers are more likely than two-year transfers to have the highest level of academic preparation.¹³ Thirty-eight percent of four-year transfers earned high school GPAs in the highest quintile, while only 15% of two-year transfers had GPAs in the highest quintile. Furthermore, 37% of four-year transfers completed calculus or precalculus in high school compared to 13% of two-year transfers.

While the above figures suggest that elite institutions could more easily find academically prepared four-year transfers than academically prepared two-year transfers, they do not imply that an elite institution could not find a pool of prepared two-year transfers if the institution concentrated on this population and recruited nationally. Based on the above figures, about one in seven two-year transfers have strong high school grades and a similar share has high levels of mathematics preparation, a major predictor of college success (Adelman, 2006).¹⁴ Furthermore, some community college students could join the “credible applicant pool” (Bowen et al., 2005) through exceptionally strong performance during their first two years of college.

Elite institutions may not feel compelled to target two-year transfers in general but could be compelled to specifically target low-income community college students in order to improve their socioeconomic diversity. Our analysis of academic preparation using NELS suggests that some academically prepared lower-income students may be available, but students from the lowest income bracket may be few in number. Among those students from the lowest SES quintile who transferred from a community college, only 8% had high school grades in the highest quintile and only 3% completed calculus or precalculus in high school.¹⁵ These figures, however, expand to 19% and 10%, respectively, for students in the fourth quintile (20th to 40th percentiles).

Predictors of Institutional Receptivity to Transfer Enrollment

Cheslock (2005) identified a number of factors that determine the share of an institution’s incoming students who are transfers (the transfer enrollment rate), but two factors were found to be the strongest and most consistent predictors: an institution’s attrition rate and its share of students living on campus in residence halls. The attrition variable is influential because, through transfer admissions, institutions can replenish upper-level course enrollments and tuition revenues depleted when

students drop out. The residential housing variable likely demonstrates the challenge of introducing transfers into cohorts of students who share many academic and social experiences during their first two years of college and develop an identity as a freshman class.

One would expect institutions with higher attrition rates and low campus housing rates to be particularly amenable to increasing the enrollment of transfer students. The most selective schools do not have these characteristics. In our sample of selective institutions from the College Board data, the attrition rate is 11% for public institutions and 9% for private institutions, while the corresponding figures for less selective four-year institutions are 28% and 27%. The mean campus housing rates are 88% and 97% at public and private selective institutions, respectively, compared with considerably lower rates of 62% and 78% for less selective schools.

Furthermore, the attrition rate appears to be an especially influential determinant of transfer enrollment for the selective institutions in our sample. Table 3 contains separate regression analyses for selective and less selective schools.¹⁶ (See Cheslock, 2005, for a complete discussion of the variables, data sources, and analytic model.¹⁷) The results demonstrate that a 10 percentage point increase in attrition is associated with a 5.8 percentage point increase in the transfer enrollment rate at selective institutions, compared with an increase of only 1.3 percentage points at less selective institutions. The results for campus housing, however, are quite similar for selective and less selective institutions. The larger effect of attrition for elites is not surprising, because selective institutions can more easily adjust their enrollments in response to high attrition. Elite institutions have an ample supply of applicants, including transfers who were turned away as freshmen. Consequently, increasing the enrollment of transfer students only requires the acceptance of applicants who would otherwise have been denied. In contrast, less selective institutions must increase the number of applicants through recruitment and marketing in order to expand enrollment. They may not always be able to meet their enrollment goals for their freshman class and are less likely, faced with attrition, to have a ready supply of upper-class transfer students whose enrollment was deferred because of initial rejection of their application, a less competitive financial aid offer, or placement on an admissions waiting list.

Discussion and Implications of the Findings

The findings of this study make it clear that elite colleges are not using transfer admissions to reduce the inequitable socioeconomic composition of their student bodies, despite the disproportionate enroll-

TABLE 3
 Determinants of the Fall 2002 Transfer Enrollment Rate, by Selectivity^{a,b,d}

Independent variable	Selective ^c	Less selective
First-year attrition rate	0.5780*** (0.1996)	0.1270** (0.0567)
% Freshmen in campus housing	-0.3429*** (0.0835)	-0.2482*** (0.0275)
Number of majors	0.0002 (0.0002)	0.0001 (0.0002)
Percent of applicants accepted	-0.0296 (0.0370)	-0.0289 (0.0491)
Undergraduate enrollment (in 1,000s), logged	0.0048 (0.0149)	-0.0322*** (0.0080)
Tuition & fees (in \$1,000s)	-0.0013 (0.0012)	-0.0035** (0.0014)
% of state students in two-year institutions	0.0684 (0.0536)	0.3036*** (0.0519)
Previous cohort size/current cohort size	-0.1005 (0.1905)	0.2487 (0.1843)
Public institution	0.0734 (0.0487)	0.0297 (0.0258)
Location: rural or town	-0.0094 (0.0130)	-0.0194*** (0.0069)
Liberal arts college	-0.0240* (0.0123)	-0.0766*** (0.0130)
Intercept	0.4884** (0.1881)	0.1682 (0.2067)
N	172	892
R-squared	0.6183	0.4326

^aSource: Analysis of the Annual Survey of Colleges of the College Board and Database, 2003–2004. Copyright 2003 College Entrance Examination Board. All rights reserved.

^bCoefficients and standard errors (in parentheses) are reported.

^cSelective institutions are those ranked as most or highly competitive in the 2003 or 2005 Barron's Profiles of American Colleges.

^d* $p < 0.10$; ** $p < 0.05$, *** $p < 0.01$.

ment and availability of low-income students in community colleges. In a particularly striking finding, our results show that fully half of all community college transfer students from the high school graduating class of 1992 who enrolled in highly selective colleges were from the very highest SES quintile. In contrast, a mere 7% were from the two lowest quintiles combined. On a national level, the current number of low-income community college transfer students in the entering classes of elite institutions is extremely small—less than 1 in 1,000. Surprisingly, although low-income transfer students increase in numbers at less selective institutions, they are still substantially underrepresented there, with

an enrollment share of only 22% for the lowest two SES quintiles. These findings suggest that community colleges do not act as effectively as we might hope as the “people’s college” or “democracy’s college” (Valadez, 2002) in a higher education system where transfer provides social mobility for poor and working-class students.

Our study also sheds light on why elite institutions do not typically enroll low-income community college transfer students. First, elite colleges and universities admit very few transfer students in general. This is largely because highly selective institutions have very low attrition rates, so, unlike less selective institutions, they have only a minimal need to replenish lost enrollments in upper-level classes. When elite institutions do admit transfers, the students are far more often arriving from other four-year institutions (and, again, are disproportionately from the highest SES quintile). The pool of students who can present academic credentials that place them in the “credible applicant pool,” to use Bowen et al.’s (2005) expression, is much larger among the four-year college transfer population than among community college transfers.

Given these conditions, before elite institutions will begin to recruit and enroll low-income community college transfer students in greater numbers, the case must be made that they have an obligation to do so. Governed by state-level articulation agreements and higher education strategic plans, highly selective public universities in some states, such as California, Florida, Illinois, and Washington, do have a statutory obligation to enroll community college transfers. Compared to their private sector counterparts, they do enroll many more of these students (14% of the entering class versus 1% at private universities) and are clearly playing a role in providing access to the baccalaureate through transfer.¹⁸ This share is somewhat lower than at less selective public universities, where it is 20%, and perhaps also less than what would be necessary to meet the expectations of policies that place considerable emphasis on transfer access to the baccalaureate (Boswell, 2004; Long, 2005; Manzo, 2004; *StateNotes*, 2005). Despite this emphasis, the majority of states do not have efficient and concrete articulation policies (*StateNotes*, 2005) and some agreements become compromised when high-demand colleges or majors do not accept transfer students (Gabbard et al., 2006).

Here we argue that society has a democratic interest in ensuring access to elite higher education for students who were disenfranchised in their precollege schooling and that expanding the community college transfer pathway is an appropriate way to do so. Then we outline a research agenda to deepen understanding of the most effective ways to increase transfer access for low-income students. Because transfer may in

fact provide a particularly efficient way to provide such access, we focus on studies that will investigate the costs and effectiveness of transfer policies and programs.

*The Democratic Imperative for Community College
Transfer Access*

A number of objections quickly arise against the notion that elite institutions are obligated to enroll community college transfer students. Given low attrition, for example, there is little room for transfers under current enrollment levels. Further, there is an ample supply of academically prepared low-income high school graduates available to increase the socioeconomic diversity of elite campuses (Carnevale & Rose, 2004). If more low-income students are to be admitted, enrolling them for four-years and exposing them to the full range of curricular and extracurricular benefits of an elite education makes even more sense. Moreover, in their role as gatekeepers and educators of officeholders and professionals, elite institutions have the right to set relevant academic and communal standards for admission.

However, these objections can be countered by the more fundamental point that the system for distributing the benefits of an elite college education is legitimate and nondiscriminatory only when all students meeting the academic standards receive equal consideration. Gutmann (1987) argued that applicants should not be excluded from consideration on the basis of the associational freedom of the elite college or university. According to principles of nondiscrimination, elite institutions have an obligation to evaluate the applications of all qualified applicants, including community college students. In light of the severe underrepresentation of low-income students at elite institutions, the case can also be made for special treatment of low-income community college applicants, who are among those most likely to have been disadvantaged in their precollege schooling.

Although universities are not primarily responsible for the inequities of early schooling, they do have a responsibility not to perpetuate those inequities through their admissions standards and educational practices. This responsibility can be carried out by recognizing that some students had only a “bare opportunity” (Howe, 1997) to gain a high-quality education by the end of high school. Community colleges provide a critical second chance to those students. It is essential that elite institutions accept the educational attainments of community college students as legitimate credentials for application and admission; otherwise educational inequities are perpetuated. This argument is complementary to calls for class-based affirmative action through direct outreach to low-income students in high

schools as well as to affirmative action to enroll African American, Latino, and other historically disadvantaged students. The SES gaps in elite college participation are so large that colleges will need to use all strategies at their disposal to achieve an equitable distribution of access.

From a compensatory education perspective, the evaluation of applications of community college students from poor and affluent backgrounds may be subject legitimately to different evaluation criteria. Elite institutions can justify rejecting some qualified applicants to compensate other qualified applicants who were not provided an adequate opportunity to learn during their early schooling (Gutmann, 1987). The admission of lesser qualified students who meet a threshold of academic preparation is justified if the institution can bring educationally disadvantaged students to their standards and graduate them successfully. To some extent, then, the obligation of elite institutions to low-income transfer applicants hinges on their capacity to provide effective compensatory academic programming and student services. Elite colleges need not aim to compensate all who faced educational deprivation in their precollege years. Only those with the ability to benefit deserve special treatment in admissions and the provision of additional resources to ensure they succeed (Gutmann, 1987).

Gutmann (1987) also distinguishes between the academic contributions of the most academically able and the academically able. Restricting admissions to the most academically able does not necessarily enable an institution to generate the greatest academic benefit, because the most academically able are likely capable of learning on their own. In addition, an intellectually, racially and ethnically, and socioeconomically diverse group of academically able learners may well generate a more intellectually stimulating environment by bringing together students who question each others' assumptions, stereotypes, and unconscious cultural perspectives. Supporting this view, the recent Supreme Court decisions in the University of Michigan affirmative action cases (*Grutter v. Bollinger et al.* and *Gratz v. Bollinger et al.*) provide a "ringing endorsement of the value of student body diversity in promoting numerous benefits" (Joint Statement of Constitutional Law Scholars, 2003, p. 5). The Court's decisions established that keeping the paths to positions of leadership open to "all segments of American society" is a compelling democratic interest (cited in Bowen et al., 2005, p. 344, note 54).

A Research Agenda to Support Effective Transfer Access to Elites

This study demonstrates that, despite the democratic imperative to distribute access to elite higher education in an equitable manner, elite

institutions are missing an important opportunity to do so. This is surprising, in a way, because expanded recruitment of community college transfer students is one of only a small number of strategies at their disposal to reduce enrollment inequities. Our study reveals several reasons for this underutilization of transfer, such as the low attrition rates at elite institutions and the effort required to identify academically prepared students. We recommend a broad-based research agenda to further improve understanding of the costs and effectiveness of transfer programs and policies.

Our study provides some suggestive evidence regarding the size of the pool of academically prepared low-income community colleges students, but this topic deserves a more extensive examination than allowed here. Such an examination would help identify the extent to which college readiness contributes to the poor transfer rates of low-income students. Researchers also need to examine the interactions between student aspirations, social expectations, and student choice and how these contribute to the number of available community college transfers, a topic not addressed in this study. This choice process is heavily influenced by faculty, counselors, and other institutional “transfer” agents (Pak, Bensimon, Malcom, Marquez, & Park, 2006). Additional research into effective outreach, counseling, and academic preparation programs at community and elite colleges is needed.

Elite colleges may have difficulty examining the collegiate academic record of community college transfer applicants, who typically attend institutions with a substantially different mix of missions, pedagogy, and curricular structures than those at selective colleges. This uncertainty may partially explain the preference of elite institutions for four-year transfers over those from community colleges. Studies of those experiences at the community college that are associated with later success at elite institutions will help develop effective transfer admissions standards. Recent research has shown that elite colleges do graduate, at rates similar to direct entrants, community college transfers who had high baccalaureate aspirations at the end of high school (Melguizo & Dowd, in press). Future research should examine the links between successful bachelor’s degree attainment and cognitive and noncognitive indicators of ability, such as leadership and community organizing, at the community college level.

Elite colleges may be concerned that transfers will diminish a strong residential or communal culture. Colleges have a legitimate right to define their college culture and communal values through education, residency, and cohort requirements. Program evaluation and interpretive case study research can uncover what is lost and gained in this respect

when elite institutions enroll transfers in greater numbers. Elite institutions may also be concerned that increasing transfer students may require an expansion of upper-level courses, which are smaller and consequently more expensive. These costs can be examined empirically, however, to assess transfer capacity in particular courses and majors. Research into these fiscal issues may show that there are areas where transfers can be absorbed with little cost, thereby reducing fiscal barriers to expanded transfer enrollment.

Any elite institution wishing to substantially increase its enrollment of low-income community college transfer students will need to consider new recruitment, admissions, counseling, and curricular structures in order to ensure success. Case studies of successful institutions will be valuable, although relatively few instances appear to exist. A recent national study involving interviews with counselors, administrators, and faculty at highly selective institutions and community colleges demonstrates that a small number of specialized programs currently recruit and graduate community college transfers (Dowd, Bensimon, Gabbard et al., 2006; Gabbard et al., 2006). By and large, however, such efforts are nonexistent or underdeveloped at most elite colleges. Evaluation of the colleges funded by the Jack Kent Cooke Foundation's Community College Transfer Initiative is likely to shed light on the characteristics of effective strategies.

Finally, assessment strategies focused on transfer practices and policies are needed. Researchers have developed a transfer access self-assessment inventory to assist two- and four-year colleges in completing a cultural audit of transfer-oriented practices, programs, and policies (Dowd, Bensimon, & Gabbard, 2006). Assessment instruments should also be developed to conduct cost studies of the human, physical, and material resources allocated to promote transfer and to determine how effectively those resources are used.

Conclusion

Treating transfer to an elite institution as a valuable academic outcome for students who start their postsecondary education at colleges of lesser status, the results of this study demonstrate clear outcome inequities (Dowd, 2003; Howe, 1997) in transfer access for low-income community college students. That the same can be said, based on prior research by others (Bowen et al., 2005; Carnevale & Rose, 2004; Winston & Hill, 2005), about freshmen admission or, based on the results of this study, about transfer to less selective four-year colleges only compounds the problem. These socioeconomic inequities in transfer access

severely undermine a higher education system where community colleges are intended to be low-cost engines of social and economic mobility. In a democracy, equitable access to elite institutions is critical to ensure public investments in higher education do not simply reproduce the existing class structure.

Notes

¹Source of Data: the Annual Survey of Colleges of the College Board and Data Base, 2004–2005. Copyright 2003–2004. Copyright 2003. College Entrance Examination Board. All rights reserved.

Colleges report their total number of transfer students and the proportion of those transfers enrolling from two-year and four-year colleges. The number of two-year and four-year transfers is calculated from the product of these proportions and the total number of transfers.

The College Board does not provide a precise definition of a transfer student in its survey, so individual institutions determine which students count as transfers. The definitions used by individual institutions will differ slightly from those established by Adelman (2005) and used in our analysis of the NELS data.

The survey does not distinguish community college transfer students from those transferring from proprietary or private nonprofit two-year colleges. However, given the relative population size of students in these two sectors (Knapp, 2003), it is reasonable to assume that about 95% of these two-year transfers were in fact community college students. In fall 2001, 95% of the more than 6,250,000 students enrolled in degree-granting two-year institutions were at public colleges. About 3.5% were at private for-profit colleges, with the remainder at private not-for-profit colleges (Knapp, 2003).

To increase sample size, we used the most recently available data from the fall 1999 to fall 2001 period for those schools missing fall 2002 data. This imputation was used for approximately 20% of our sample. Because enrollment figures vary relatively little across corresponding years, this imputation does not introduce substantial measurement error.

²Institutions in the most competitive bracket had a student body with an average SAT I or ACT score at or above 655 or 29, respectively. Students typically ranked in the top 20% of their class and had an average high school grade point average of B+ or higher. These institutions accept less than a third of their applicants. The equivalent values for institutions ranked as highly competitive are SAT I/ACT scores at or above 620/27, average GPA of B or higher, and an admissions rate less than or equal to 50%.

³Several unique institutions, such as the military academies, were omitted from the sample. While all 179 institutions are used for the population estimates, smaller subsamples are used in other analyses due to missing data for key variables.

⁴The sample does not include proprietary colleges or institutions that were not ranked in one of the following categories of the 2000 Carnegie Classification: Doctoral Research University, Master's College or University, Baccalaureate College, School of Engineering and Technology, or School of Business and Management.

⁵The NELS:88/2000 is a complex survey sample with a stratified sampling design and unequal probabilities of selection. The findings are appropriately weighted (using the weight F4F2P2WT) for point and population estimates. Robust methods were similarly employed for variance estimation using the “svy” functions where appropriate in Stata.

⁶Many students, including transfer students, attend more than one four-year institution, and often those institutions differ in terms of their institutional selectivity. Therefore, the selectivity of the institution to which a student transfers can be defined by the first, last, or most selective four-year institution attended. In this study, the institutional selectivity of a student's four-year college is represented by the most selective institution attended.

⁷The index is based on the father's occupation and education, the mother's education, family income, and material possessions.

⁸There are noteworthy exceptions at liberal arts colleges with special programs that serve higher numbers of community college transfers, such as the Ada Comstock Scholars at Smith College, Francis Perkins Scholars at Mt. Holyoke College (both of which are designed for older female students), and Exploring Transfer at Vassar College (Chenoweth, 1998; Geraghty, 1997).

⁹While it would be desirable to observe the college readiness of students across the SES distribution and the three comparison groups, the small sample size of community college transfers to selective colleges prohibits a more disaggregated analysis with any reasonable degree of statistical precision.

¹⁰These differences in the middle-class quintiles are not statistically significant due to imprecise estimates for the small sample of two-year transfer students. However, an alternative test using income quartiles in a larger sample of selective institutions yields statistically significant results for differences in the middle-income quartiles with substantively equivalent enrollment shares. In the alternative specification, the sample included institutions coded as selective in the NELS:88/2000 postsecondary transcripts restricted database. The number of cases of community college transfers to selective institutions increases from 99 to 877.

¹¹By definition, population estimates should be based on the full population of institutions, not only those reporting valid data. For the 33 institutions not included in Table 2 due to missing data in the variable indicating the share of two-year transfers in their entering fall cohort, the number of two-year transfers was calculated by multiplying the institution's reported number of total transfers, which typically was not missing, by the median two-year transfer enrollment share for their institutional type.

¹²Four states with a large number of community college students contribute 71% of the total population of two-year college transfer students at elite institutions: Enrollments at selective institutions in California contribute 36% of the elite transfer population, while Texas, Florida, and New York each contribute 11% to 12%.

¹³In this analysis, we examine all students who transfer to another four-year institution, regardless of the receiving institution's selectivity. Incorporating students who transfer to less selective institutions allows us to describe the pool of transfer students that may be available to elite institutions.

¹⁴A GPA from the highest quintile or the completion of calculus or precalculus is not sufficient for admission at an elite institution, and some students with these characteristics may lack other credentials necessary for admission. That said, analysis of the high school GPAs and mathematics preparation of direct entrants at elite institutions indicates that a perfect record is not required for admissions at some of these institutions. Thirty-seven percent of direct entrants were admitted with a high school GPA below the top quintile, and 32% had not completed calculus or precalculus.

¹⁵The differences in high school GPAs across SES quintiles should be viewed with caution as they are not statistically significant at conventional levels.

¹⁶We report the results from an ordinary least squares regression (OLS). A curvilinear logistic model was also estimated to test the severity of departure from linearity in the OLS model. The results were similar across the two specifications, indicating the OLS results are robust.

¹⁷Because of the high concentration of a large proportion of community college students in certain states, we use robust standard errors with clustering, which relaxes the assumption that the error terms are identically distributed, as well as the assumption of independence between observations in the data. This technique is an extension of the robust variance estimation developed by Huber (1967) and White (1980) that was first provided in writing by Rogers (1993).

¹⁸Our analyses do not indicate what proportion of these transfers are low-income students. A recent national case study of transfer access at highly selective institutions sug-

gests that highly selective public universities do not typically collect data to analyze transfer enrollment by socioeconomic status and do not typically target their transfer outreach efforts to low-income students (Gabbard et al., 2006). Furthermore, the higher tuition and housing costs (Long, 2005) and the distinct cultural emphasis on competitiveness and prestige (Dowd, Bensimon, Gabbard, et al., 2006) at highly selective research universities may depress the enrollment of low-income transfers.

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