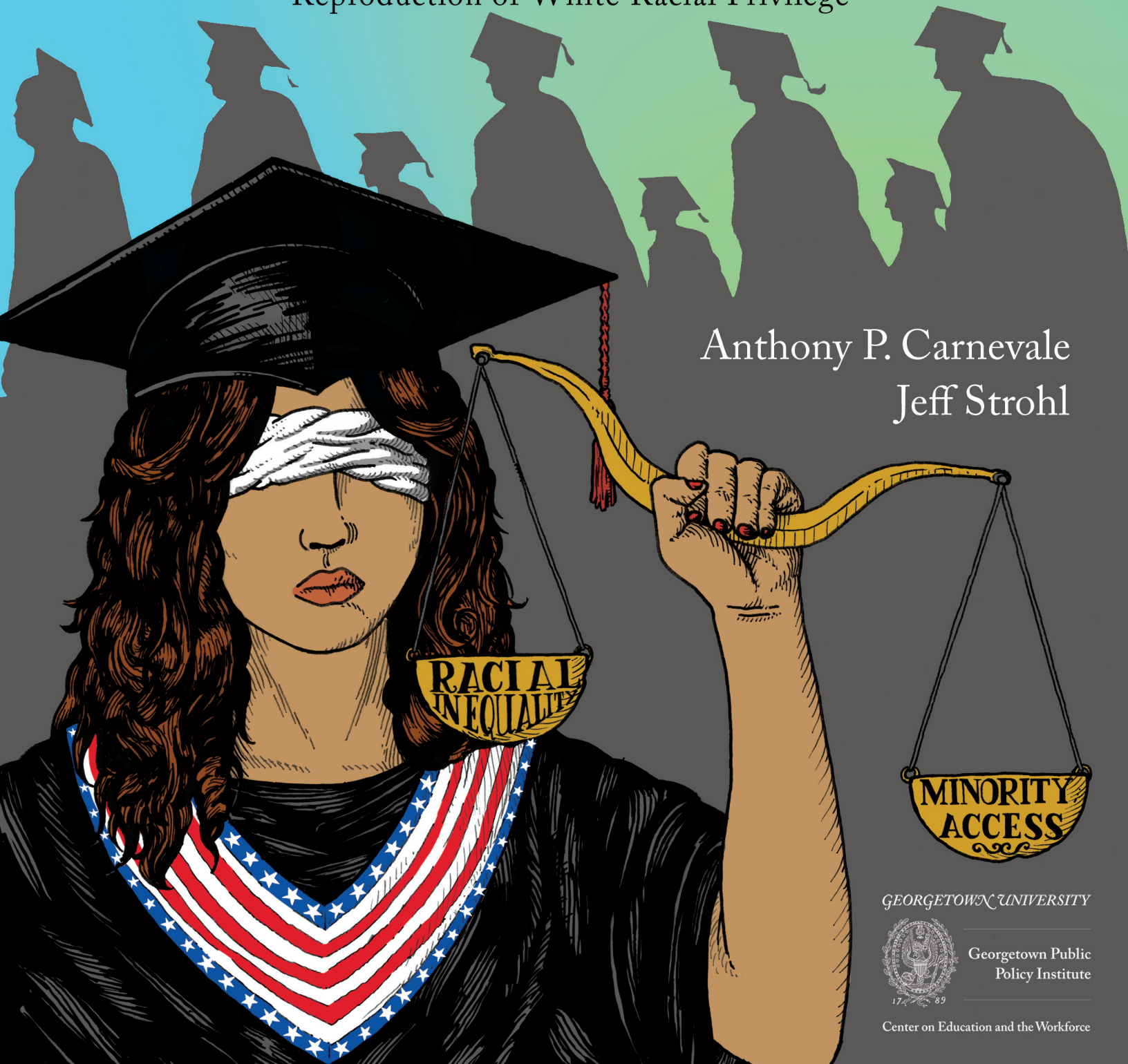
& SEPARATE & UNEQUAL

How Higher Education Reinforces the Intergenerational Reproduction of White Racial Privilege



Anthony P. Carnevale
Jeff Strohl

GEORGETOWN UNIVERSITY
Georgetown Public Policy Institute
Center on Education and the Workforce

SEPARATE AND UNEQUAL

How Higher Education Reinforces the Intergenerational Reproduction of White Racial Privilege

July 2013

Acknowledgements

We would like to express our gratitude to the individuals and organizations that have made this report possible. First, we thank the Bill & Melinda Gates Foundation, Lumina Foundation, and the Joyce Foundation for their support of our research over the past few years. In particular, we are grateful for the support of Daniel Greenstein and Elise Miller from the Bill & Melinda Gates Foundation, Jamie Merisotis and Holly Zanville from Lumina Foundation, and Whitney Smith from the Joyce Foundation. We are honored to be partners in their mission of promoting postsecondary access and completion for all Americans.

We owe special thanks to Richard Kahlenberg, who has been a partner in our efforts in understanding both race- and class-based affirmative action for more than a decade.

We also would like to thank Cindy Decker and Juan Carlos Guzman for providing superb research and data analysis assistance throughout; Josías Castorena and Enrique Portillo – the report's designers for their outstanding creative work; Nancy Lewis and Stephanie Soutouras Schlick– the report's editor and copy editor, for their patience and hard work to bring this report to completion; and everyone at Mosaic, the report's printers, especially Michael Orr and Tim Keagy.

Our thanks also go to our colleagues, whose support was vital to our success: Andrew Hanson and Artem Gulish for providing research and editorial assistance in the preparation of the report; Nicole Smith and Stephen J. Rose for contributing to both methodological and editorial decisions; Andrea Porter for her strategic guidance in the design and production of the report; Ana Castañón for assisting with the logistics and providing overall support; and Andrew Debraggio for his bibliographic support. Finally, we want to thank other colleagues, too many to list here, who provided support and insight throughout the process.

Many have contributed their thoughts and feedback throughout the production of this report. That said, all errors, omissions, and views remain the responsibility of the authors.

The views expressed in this publication are those of the authors and do not necessarily represent those of the Bill & Melinda Gates Foundation, Lumina Foundation, or the Joyce Foundation, their officers, or employees.

Table of Contents

List of Illustrations

Separate and Unequal: How Higher Education Reinforces the Intergenerational Reproduction of White Racial Privilege

Introduction

White flight from the center city to better neighborhood schools in the leafy green suburbs has finally arrived on the nation's ivy-covered college campuses. The racial and ethnic stratification in educational opportunity entrenched in the nation's K-12 education system has faithfully reproduced itself across the full range of American colleges and universities.[1] Racial stratification permeates the two- and four-year college and university system among the more than 4,400 institutions analyzed in this study (see appendix A).[2]

Even more striking is the growing polarization of the most selective institutions and the least selective open-access schools. White students are increasingly concentrated today, relative to population share, in the nation's 468 most well-funded, selective four-year colleges and universities while African-American and Hispanic students are more and more concentrated in the 3,250 least well-funded, open-access, two- and four-year colleges.[3]

The American postsecondary system is a dual system of racially separate and unequal institutions despite the growing access of minorities to the postsecondary system. Polarization by race and ethnicity in the nation's postsecondary system has become the capstone for K-12 inequality and the complex economic and social mechanisms that create it. The postsecondary system mimics and magnifies the racial and ethnic inequality in educational preparation it inherits from the K-12 system and then projects this inequality into the labor market.

The education system is colorblind in theory. In fact, it operates, at least in part, as a systematic barrier to college for many minorities who finish high school unprepared for college. It also limits college and career opportunities for many African Americans and Hispanics who are well prepared for higher education but tracked into crowded and underfunded colleges where they are less likely to develop fully or to graduate. Increasing racial and ethnic polarization appears to be inseparable from the expansion of access to American educational opportunity first in K-12 education and now in the postsecondary system.[4]

The polarization of the postsecondary system matters because resources matter. The 468 most selective colleges spend anywhere from two to almost five times as much per student. Higher spending in the most selective colleges leads to higher graduation rates, greater access to graduate and professional schools, and better economic outcomes in the labor market, when comparing with white, African-American, and Hispanic students who are equally qualified but attend less competitive schools. Greater postsecondary resources and completion rates for white students concentrated in the 468 most selective colleges confer substantial labor market advantages, including more than $2 million dollars per student in higher lifetime earnings, and access to professional and managerial elite jobs, as well as careers that bring personal and social empowerment.[5]

Affluent white students as well as prestige seeking four-year colleges are flowing to the top tiers of selectivity while lower income minority students are flooding low tuition, open-access, two- and four-year institutions. In addition, while the number of institutions classified in the selective tiers is growing, the number of open-access, four-year colleges is declining as institutions move up the selectivity tiers. The result of this dynamic is increased spending per student at the most selective colleges and overcrowding and reduced resources per student in the open-access sector (see appendix A and appendix B, tables 1 and 4).

The postsecondary system is more and more complicit as a passive agent in the systematic reproduction of white racial privilege across generations. More college completion among white parents brings higher earnings that fuel the intergenerational reproduction of privilege by providing more highly educated parents the means to pass their educational advantages on to their children. Higher earnings buy more expensive housing in the suburbs with the best schools and peer support for educational attainment. The synergy between the growing economic value of education and the increased sorting by housing values makes

parental education the strongest predictor of a child's educational attainment and future earnings.[6] As a result, the country also has the least intergenerational educational and income mobility among advanced nations.[7]

Preparation for higher education matters in allocating access and success at the 468 most selective colleges, but it's not the whole story. Differences in access, completion, and earnings persist even among equally qualified whites, African Americans, and Hispanics. The relative lack of K-12 preparation among African Americans and Hispanics does not explain fully the growing racial and ethnic stratification in postsecondary completion and subsequent economic outcomes.

The postsecondary system does not treat similarly qualified white and African-American or Hispanic students equally and thereby blunts individual opportunity and wastes valuable talent. Many African Americans and Hispanics are unprepared for college, but whites who are equally unprepared still get more postsecondary opportunities. Moreover, African-American and Hispanic students who are prepared for college are disproportionately tracked into crowded and underfunded two-year colleges and open-access four-year colleges. The postsecondary system leaves a substantial number of qualified minorities on educational pathways that don't allow them to fulfill their educational and career potential.

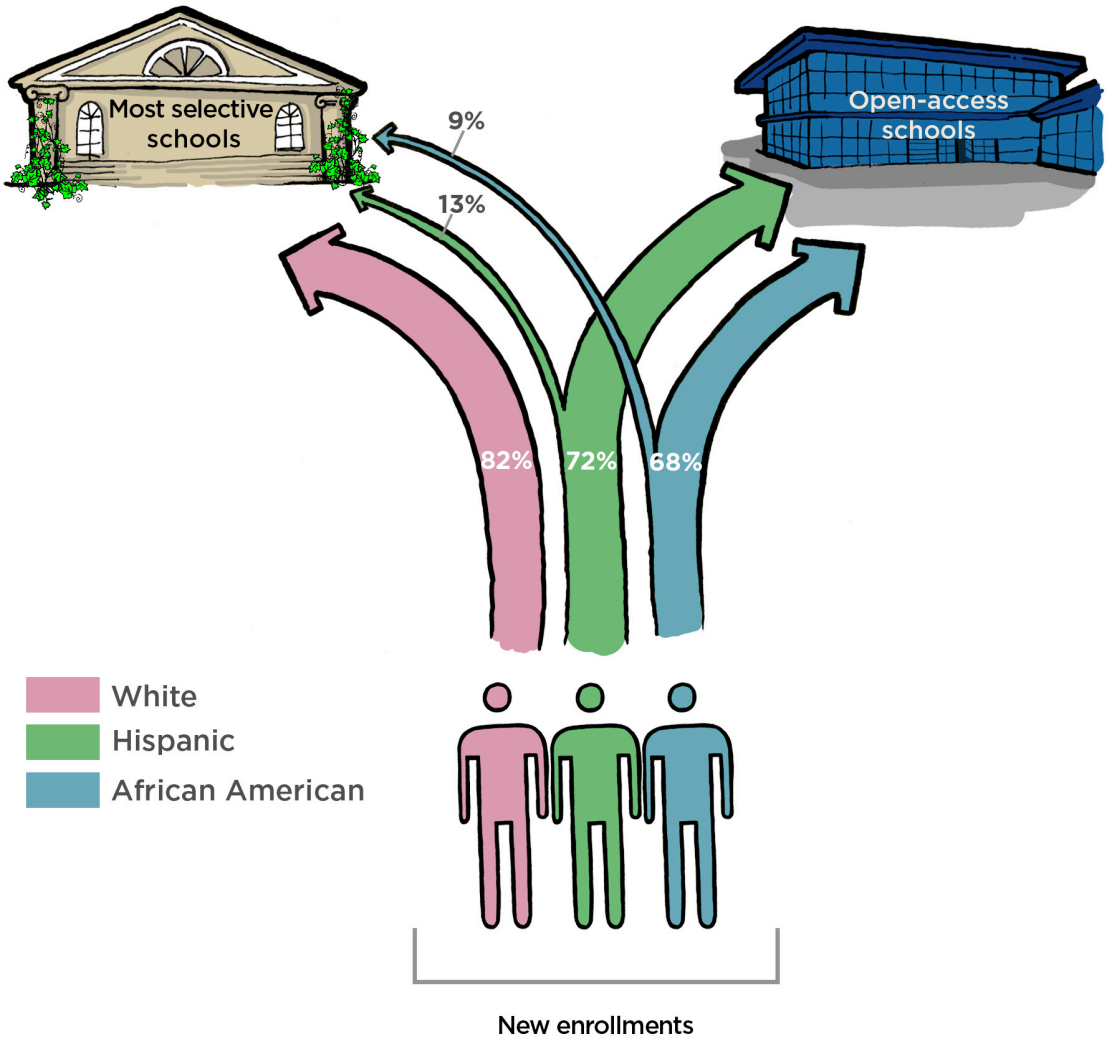
- More than 30 percent of African Americans and Hispanics with a high school grade point average (GPA) higher than 3.5 go to community colleges compared with 22 percent of whites with the same GPA (see fig. 13).
- Among African-American and Hispanic college students who score more than 1200 out of a possible 1600 points on the SAT/ACT, 57 percent eventually get a certificate, an Associate's degree, or a Bachelor's degree or better; for white students the percentage rises to 77 percent (see fig. 14).[8]
- Among African-American and Hispanic college students who score between 1000 and 1200 points on the SAT/ACT, 47 percent of African Americans and 48 percent of Hispanics earn a certificate, an Associate's degree, or a Bachelor's degree or better compared with 68 percent of whites.
- Among African-American and Hispanic college students who score above 1200 points on the SAT/ACT, 57 percent of African Americans and 56 percent of Hispanics graduate with a certificate, an Associate's degree, or a Bachelor's degree or better compared with 77 percent of whites (see fig. 14).

African American and Hispanics' access to postsecondary education over the past 15 years is a good news/bad news story. The good news is that African Americans and Hispanics scored big gains in access to postsecondary education. The bad news is that both groups are losing ground in their move up to the most selective colleges relative to their growing population shares.

The absolute numbers of African Americans and Hispanics going on to postsecondary institutions have increased markedly and their share of enrollment in the top 468 colleges has increased slightly since the 1990s. But between 1995 and 2009, more than eight in 10 of net new white students have gone to the 468 most selective colleges and more than seven in 10 of net new African-American and Hispanic students have gone to the 3,250 open-access, two- and four-year colleges.[9]

Similarly, the larger growth in college seats has been in the most selective tiers as compared with open-access colleges. Enrollments at the most selective and better resourced colleges grew significantly (78%), reflecting increased demand for high-quality postsecondary education; the vast majority of the new seats went to white students. Among open-access, four-year colleges, growth has been significantly slower (21%), but the net increases in minority enrollments were concentrated at those schools, leading to more crowding and fewer resources per student.

Since 1995, 82 percent of new white enrollments have gone to the 468 most selective colleges, while 72 percent of new Hispanic enrollment and 68 percent of new African-American enrollment have gone to the two-year and four-year open-access schools.



As a result of these uneven flows, the white share of seats at the top 468 colleges has increased, and the white share of seats at open-access colleges has declined relative to the white share of the college-age population (ages 18-24). Conversely, the relative share of new seats going to African Americans and Hispanics at the 468 most selective colleges has declined while the African-American and Hispanic share of seats at the 3,250 open-access colleges has increased relative to their share of the college-age population.

The most telling metrics of racial polarization in postsecondary education are comparisons of white, African-American, and Hispanic enrollments to their respective shares of the college-age population. Whites have increased their enrollment share in the top 468 colleges relative to their share of the college-age population (see appendix B for detailed analysis).

- In 1995, the white share of the college-age population was 68 percent, and the white share of enrollments at the top 468 colleges was 77 percent, a 9 percentage point advantage of enrollment share over population share.
- By 2009, the white share of the college-age population was 62 percent and the white share of enrollments at the top 468 colleges was 75 percent, a 13 percentage point advantage of enrollment over population share and an increase of 4 percentage points within the college-age population (see fig. 7 and appendix B).

The white share of enrollment in the 3,250 open-access, two- and four-year colleges has declined relative to the white share of the college-age population.

- In 1995, the white share of the college-age population was 68 percent and the white share of enrollment at the 3,250 open-access, two- and four-year colleges was 69 percent, reflecting a balance between enrollment and population shares.
- By 2009, the white share of the college-age population was 62 percent and the white share of enrollment at the 3,250 open-access, two- and four-year colleges was 57 percent, a 5 percentage point deficit of enrollment relative to population share and a decline of 6 percentage points within the college-age population.

The enrollment shares of African Americans and Hispanics in the top 468 colleges declined relative to their shares of the college-age population.

- In 1995, the African-American and Hispanic share of the college-age population was 27 percent, and their share of enrollments at the top 468 colleges was 12 percent, a 15 percentage point deficit of enrollment compared with population share.
- By 2009, the African-American and Hispanic share of the college-age population was 33 percent, and their share of enrollment at the top 468 colleges was 15 percent, an 18 percentage point deficit of enrollment versus population share and a decline of 3 percentage points within the college-age population.

The African-American and Hispanic share of enrollment in the 3,250 open-access, two- and four-year colleges increased relative to their share of the college-age population.

- In 1995, the African-American and Hispanic share of the college-age population was 27 percent, and their share of enrollment at the 3,250 open-access, two- and four-year colleges was 24 percent, a 3 percentage point deficit of enrollment relative to population share.

- By 2009, the African-American and Hispanic share of the college-age population was 33 percent, and their share of enrollment at the 3,250 open-access, two- and four-year colleges was 37 percent, a 4 percentage point average of enrollment relative to population share.

College readiness is important in explaining low completion rates, but the polarization of resources in the higher education system is one of the root causes of increasing college dropout rates and increasing time required to complete degrees. For every 300 college graduates, postsecondary education now produces 200 college dropouts.[10] The completion rate for the 468 most selective four-year colleges is 82 percent, compared with 49 percent for open-access, two- and four-year colleges (see fig. 10). Virtually all of the increase in dropout rates and the slowdown in completions are concentrated in open-access colleges; in substantial part because they are too crowded and underfunded.[11]

African Americans and Hispanics are more likely to go to open-access, two- and four-year colleges and less likely to achieve a Bachelor's degree or better because of it. Ultimately this leads to powerful earnings differences and reduced capacity for intergenerational investments in children's education.

This dynamic leads to significant loss of talent among minorities and lower-income students. This study also found that more than 240,000 high school students every year, who graduate in the top half of their high school class and come from the bottom half of the income distribution, do not get a two- or four-year degree within eight years of graduation from high school. The data show that roughly one in four (62,000) of these high-scoring, low-income students are African American or Hispanic (see appendix C).

More than 111,000 African Americans and Hispanics who graduate from high school each year in the top half of their class do not achieve a two- or four-year degree within eight years. If these students had attended one of the top 468 colleges and graduated at similar rates, 73 percent could have graduated (see fig. 11 and fig. 12).

Whites, African Americans, and Hispanics who score in the top half of the SAT/ACT test score distribution go to college at the same rate (90%). Yet whites have higher graduation rates and graduate school attendance because they attend more selective colleges.

Among students who score in the top half of the test-score distribution in the nation's high schools and attend college:

- Thirty percent of white students compared with more than 48 percent of African-American students and 51 percent of Hispanic students either don't go or don't complete college; and
- Fifty-seven percent of white students get a Bachelor's degree or better compared with roughly 37 percent of African-American and 36 percent of Hispanic students.

Among those who graduate from college:

- More than 81 percent of whites get a Bachelor's degree or better compared with a little more than 72 percent of African Americans and Hispanics; and
- Less than 19 percent of whites stop with a certificate or an Associate's degree compared with roughly 27 percent of African Americans and Hispanics.

Access to the 468 most selective four-year colleges and their greater completion rates are especially important to African Americans and Hispanics.

- African Americans and Hispanics gain 21 percent in earnings advantages when they attend the more selective schools compared with 15 percent for whites who attend the same colleges.[12]

- Among African Americans and Hispanics who score in the upper half of the SAT/ACT test-score distribution, those who attend one of the top 468 colleges graduate at a rate of 73 percent compared with a rate of 40 percent for equally qualified minorities who attend open-access colleges (see fig. 11).
- One-third of high-scoring African Americans and Hispanics who get Bachelor's degrees at the top 468 colleges attain graduate degrees compared with 23 percent of minorities who attend open-access colleges (see fig. 18).[13]
- African Americans and Hispanics benefit from access to selective colleges even when their test scores are several hundred points below the averages at those colleges.[14]

Moreover, this study's data support the axiom that the Bachelor's degree is the crucial postsecondary threshold for racial and ethnic equality. White, African-American, and Hispanic students who graduate with a Bachelor's degree from the 468 most selective colleges go on to graduate school at the same rate. African Americans and Hispanics who graduate with Bachelor's degrees from the open-access colleges go on to graduate school at slightly higher rates (23%) than their white counterparts (20%).

Stratification by income is strong. Earlier research demonstrates underrepresentation by income is quite stark (see Carnevale and Strohl, 2010). High-income students were 45 percentage points overrepresented compared to population share in the most selective colleges while white students were "only" 15 points overrepresented. African-American and Hispanic students were underrepresented in the most selective colleges, relative to population share by 9 percentage points; low-income students were underrepresented by 20 percentage points. While income stratification is strong, this fact does not take away from or mitigate strong and persistent racial stratification.

Race- and class-based inequalities in education overlap considerably, but race has a unique negative effect on college and career opportunities. African Americans and Hispanics are especially vulnerable to class-based economic disadvantages because they are more concentrated in low-income groups and because they are more isolated both spatially and socially from the general society.

African Americans and Hispanics usually remain concentrated in poorer neighborhoods, even as individual family income increases. As a result, race gives additional power to the negative effects of low-income status and limits the positive effects of income gains, better schools, and other educational improvements.[15] Hence, minorities are disproportionately harmed by increasing income inequality and don't benefit as much as whites from generational improvements in educational attainment or income growth.

The traditional channel of intergenerational mobility, parental education, is particularly muted for African Americans and Hispanics (see fig. 1). In comparison to white students whose parents did not go beyond high school, African-American and Hispanic students drop out of college at higher rates (34% vs. 27%), obtain certificates or Associate's degrees more often (21% vs. 18%), and do not attain Bachelor's degree as often (8% vs. 14%).

At the other end of the parental education spectrum the problem is even worse. African Americans and Hispanics benefit less than whites from their parents' educational attainment. Among students whose parents have attained at least a Bachelor's degree, African-American and Hispanic students do not attend college at twice the rate of similarly situated white students (15% vs. 7%), drop out of college much more often (37% vs. 25%), and graduate with a Bachelor's degree or better less often (35% vs. 58%) (see fig. 1).

Exacerbating this problem is the fact that low-income status appears to further dampen African-American and Hispanic educational attainment more than similarly situated whites. Compared with white

students whose families are in the bottom half of the income distribution, African Americans (55%) and Hispanics (59%) drop out of college much more often than whites (45%) while African Americans stop out with a certificate at very significant rates (24% vs. 17%). Low-income whites are more likely to graduate with a Bachelor's degree (23%) than low-income African Americans (12%) and Hispanics (13%).[16]

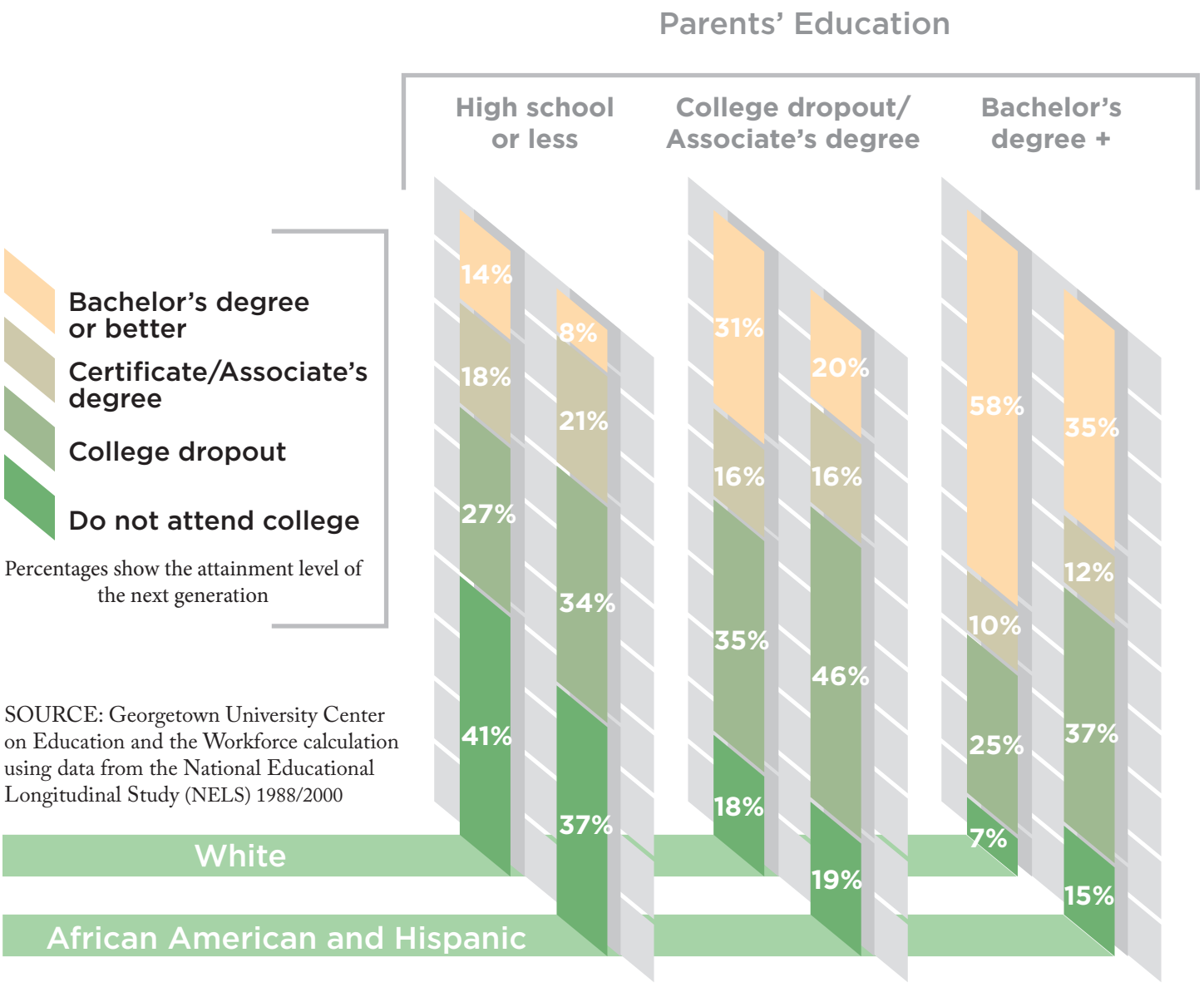


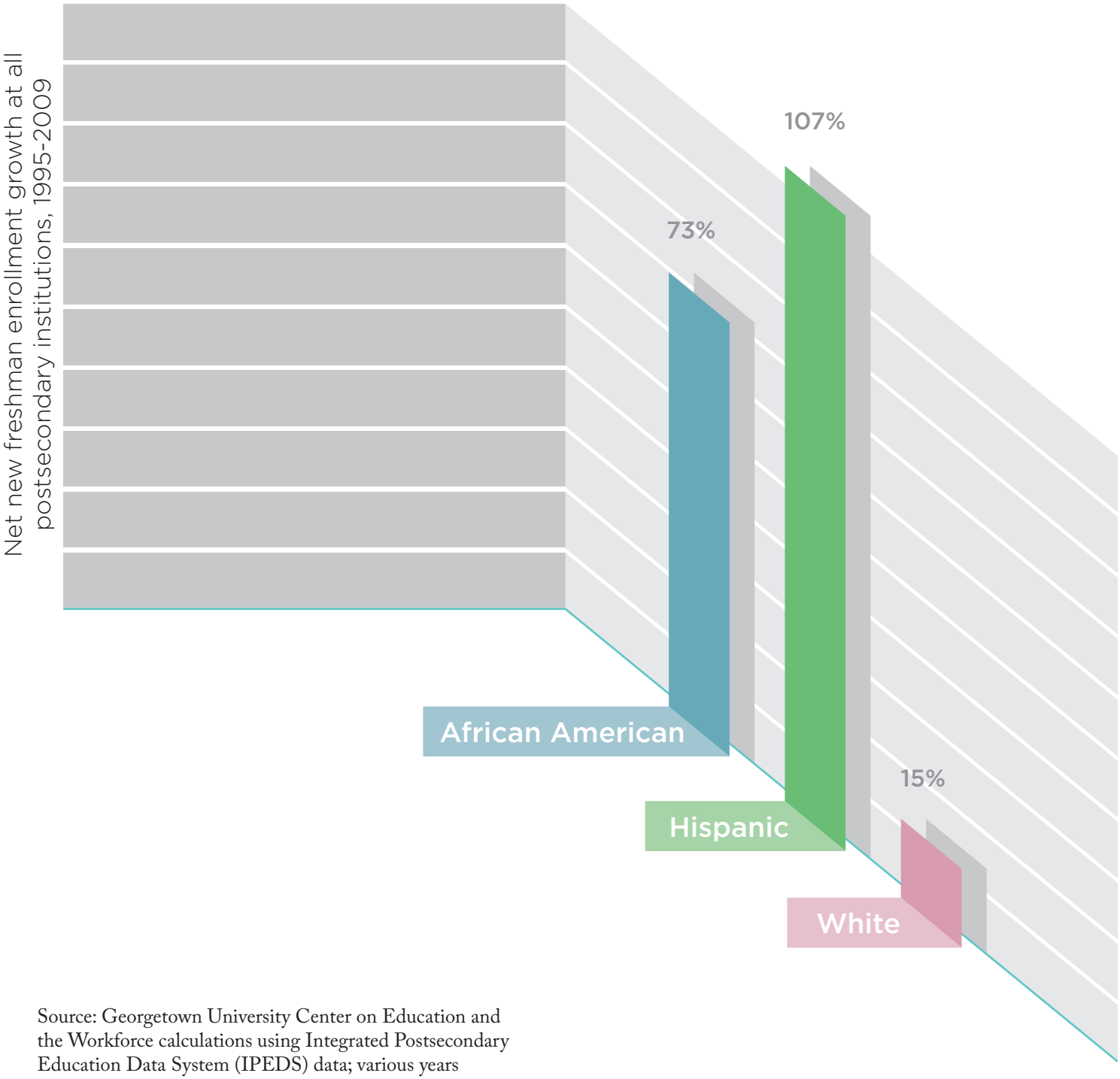
Figure 1. Whites with a college-educated parent are three times as likely to earn a Bachelor's degree as African Americans and Hispanics with a parent who dropped out of college or earned an Associate's degree.

It is difficult to clearly mark the point where racial discrimination ends and economic deprivation begins, but the evidence is clear that both negatively affect educational and economic opportunity and are most powerful in combination. The interaction of race and class disadvantages result in the spatial, social, and economic isolation that signify persistent hardship. This is why some class-based metrics that reflect class-based disadvantages in their most extreme form, like differences in wealth, family structure, parental education, and occupational status, can translate into proxies for race in college admissions.

Conversely, racial isolation can be an effective metric of class disadvantage. An example would be the use of class rank as an effective proxy for race in the ongoing brawl over race-based affirmative action: The current legal standard in affirmative action, established in *Grutter v. Bollinger* and affirmed in *Fisher v. University of Texas*, is that racial diversity is a legitimate goal for college admissions but race alone cannot be used as a standard for admission. Because of the spatial isolation of minorities, targeting specific geographic areas or high schools can produce racial diversity without using race alone as an admissions criterion. Spatial isolation of low-income minorities is what accounts for the relative success of the Texas affirmative action system, which guarantees admission for any student in the top 10 percent of his or her high school class. The Texas 10-percent solution does not use race alone but still allows substantial racial diversity in the Texas postsecondary system because it is predicated on continued racial and economic segregation in particular areas and high schools.

Part 1. African Americans' and Hispanics' Access to Postsecondary Education Is Increasing, but Racial Polarization Is Growing at the Same Time

African Americans' and Hispanics' participation in postsecondary education is increasing much faster than that of whites. Since 1995, African-American and Hispanic freshman enrollments have increased by 73 percent and 107 percent, respectively, compared with a 15 percent increase in the larger white population.

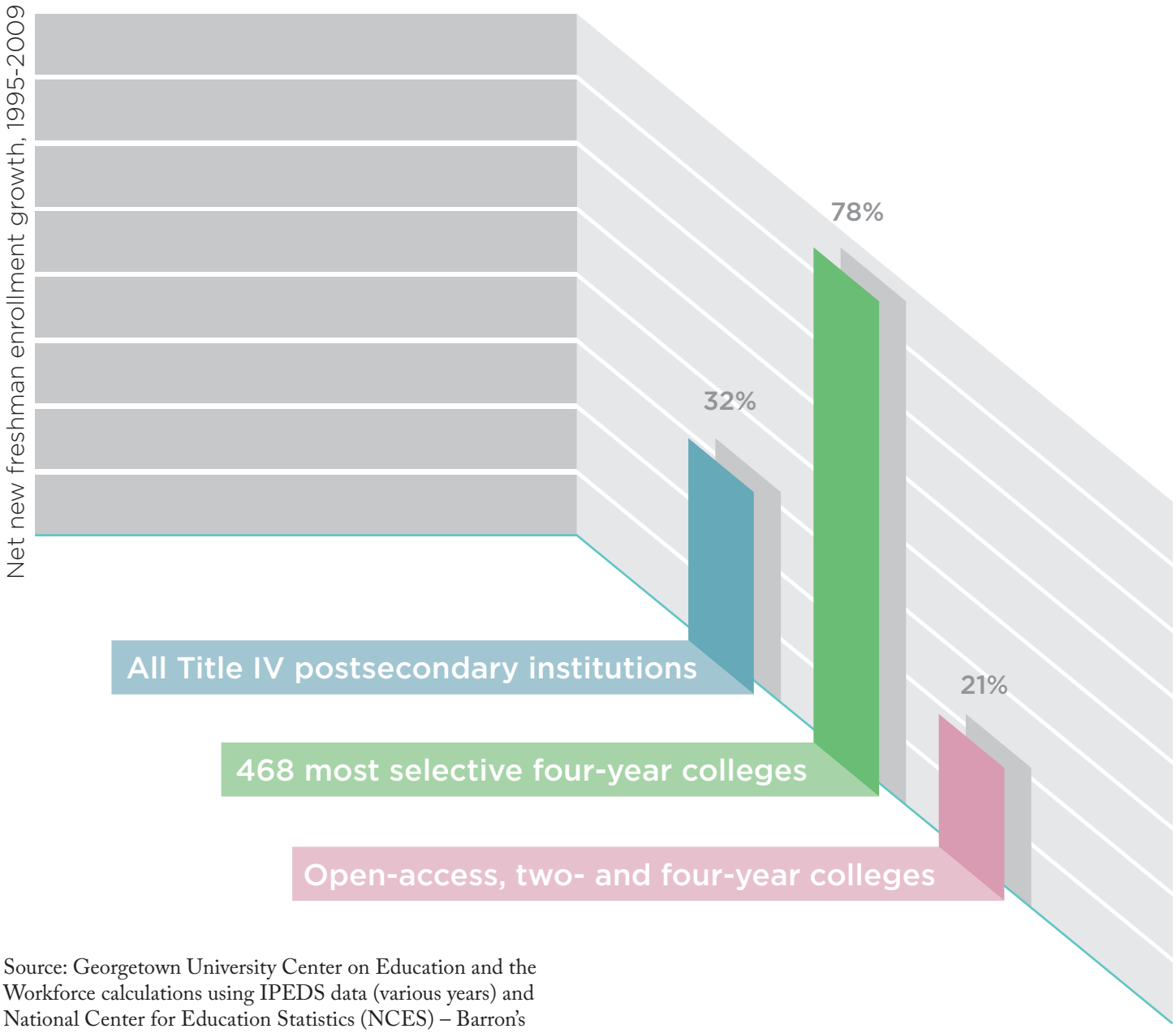


Source: Georgetown University Center on Education and the Workforce calculations using Integrated Postsecondary Education Data System (IPEDS) data; various years

Figure 2. Between 1995 and 2009, postsecondary enrollment grew significantly for African Americans and Hispanics compared to whites.

These changing demographics in postsecondary enrollments led to a 10 percentage point decline in the share of freshman enrollments for whites and a 4 percentage point increase each in enrollment shares for African Americans and Hispanics by 2009. At this point, the white freshman enrollment share was 63 percent; African American, 16 percent; and Hispanic, 13 percent (see appendix B).

As minority enrollments increased, the dynamics of polarization became very apparent. Enrollment growth in the top 468 schools was 78 percent with white students capturing virtually all the growth, while 92 percent of net new enrollments in open-access schools, where growth was just 21 percent, went to African-American (48%) and Hispanic (44%) students (see appendix B).

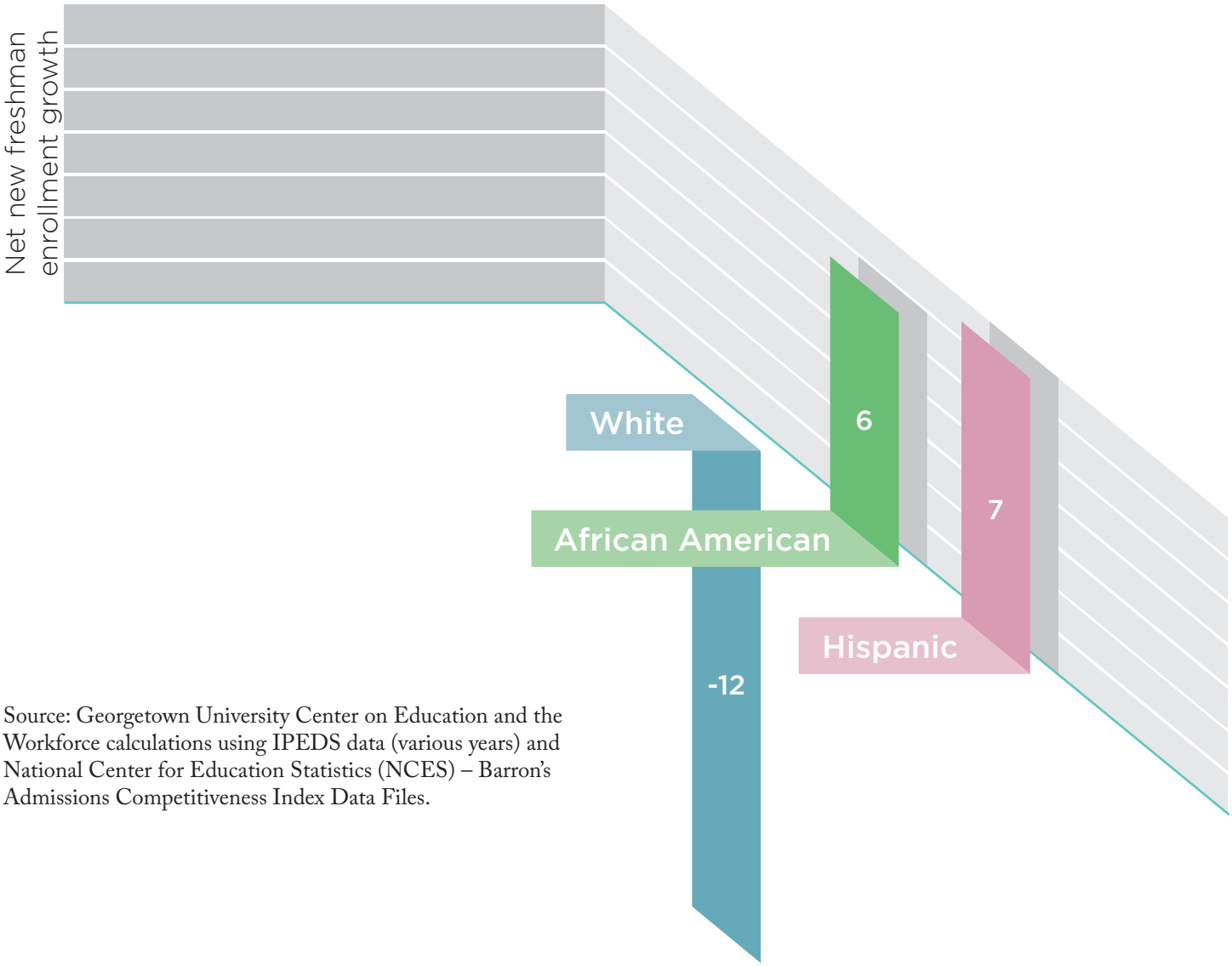


Source: Georgetown University Center on Education and the Workforce calculations using IPEDS data (various years) and National Center for Education Statistics (NCES) – Barron's Admissions Competitiveness Index Data Files

Figure 3. Between 1995 and 2009, enrollments in the top colleges grew at a rate nearly four times that of the open-access colleges.

Whites captured the growth in the top 468 colleges, while shifting out of the open-access institutions. African Americans and Hispanics moved into the seats vacated by whites in the open-access institutions. The share of postsecondary freshman enrollments of white students dropped 12 percentage points in the open-access schools while the African-American and Hispanic shares increased by 6 percentage points and 7 percentage points, respectively.

- The share for whites plummeted, dropping from 69 percent to 57 percent.
- The share for African Americans grew from 14 percent to 20 percent; Hispanics, from 10 percent to 17 percent.



Source: Georgetown University Center on Education and the Workforce calculations using IPEDS data (various years) and National Center for Education Statistics (NCES) – Barron's Admissions Competitiveness Index Data Files.

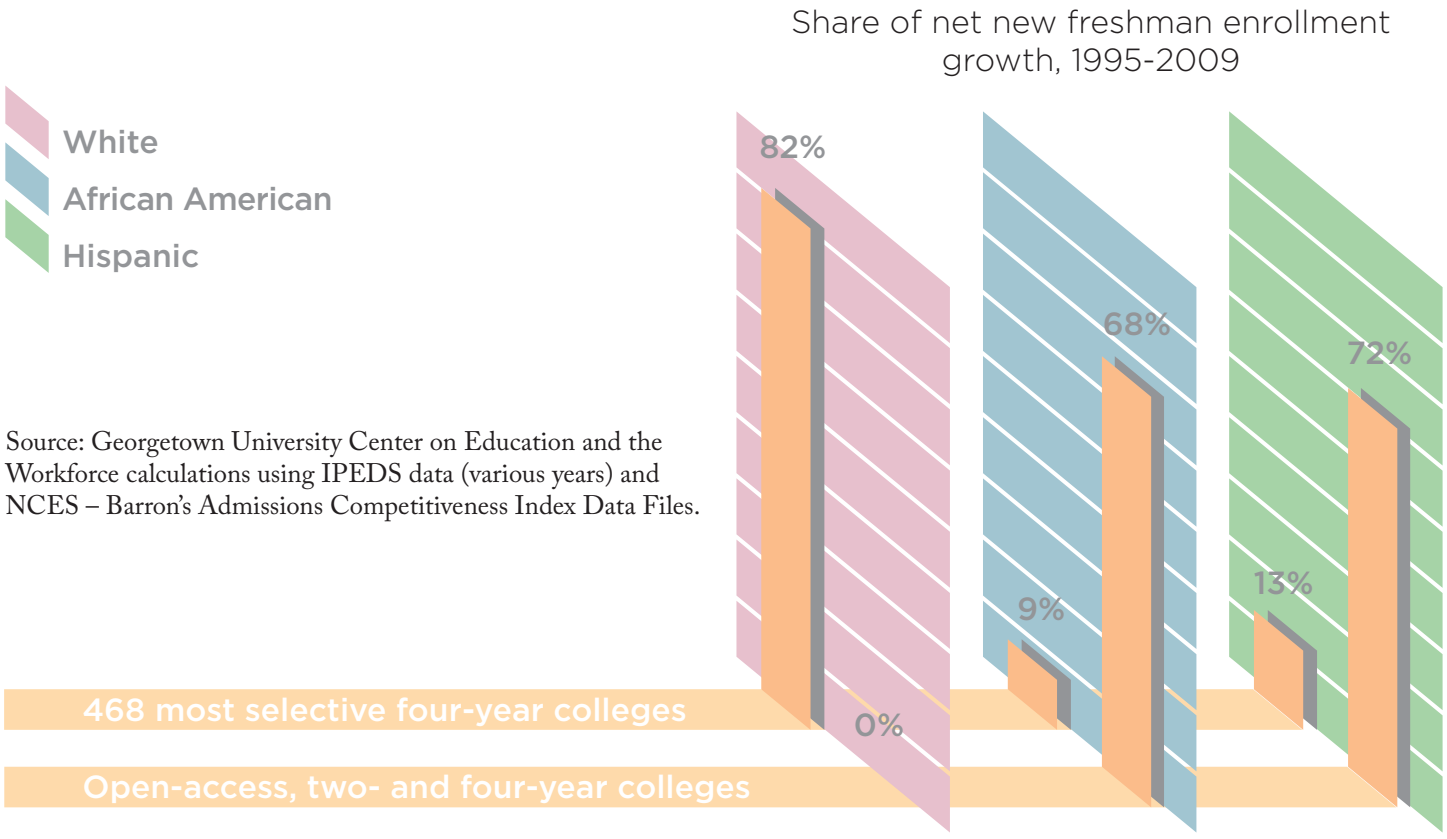
Figure 4. The white share of enrollment in open-access schools plummeted 12 percentage points.

Whites have held on to their dominance of enrollment in the top 468 four-year colleges. At the same time that the white share of overall freshman enrollments dropped from 73 percent to 63 percent, there was almost no decline in the white share at top-sector colleges. This left little room for African American and Hispanic advancement. By 2009, the freshman enrollment shares at the top schools were:

- Whites at 75 percent;
- African Americans at 7 percent; and
- Hispanics at 8 percent.

The racial polarization has intensified rapidly as white students have captured the new enrollment flows to the 468 most selective colleges, cementing their historic overrepresentation in the nation's best schools (see fig. 5). African-American and Hispanic students have been left behind in open-access, two- and four-year schools since 1995.

- Eighty-two percent of the growth in white freshman enrollment has been in the nation's 468 most selective four-year colleges.
- By comparison, only 9 percent of the increase in African-American student enrollment and 13 percent of the increase in Hispanic student enrollment have occurred at the top schools.
- Conversely, over the same period, 68 percent and 72 percent, respectively, of the new enrollments for African Americans and Hispanics have been in open-access, two- and four-year schools.



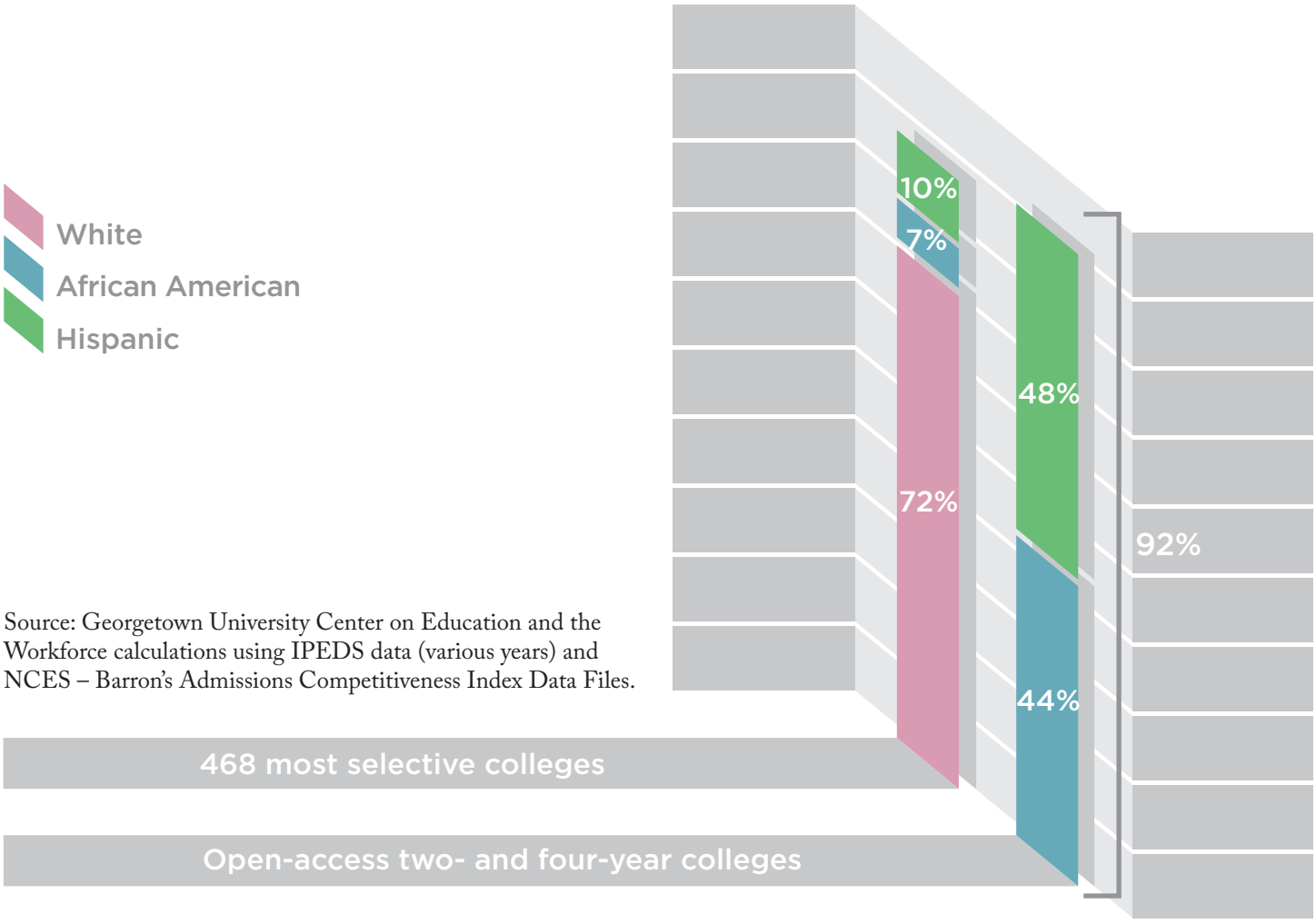
Source: Georgetown University Center on Education and the Workforce calculations using IPEDS data (various years) and NCES – Barron's Admissions Competitiveness Index Data Files.

Figure 5. New white student enrollments have flowed to the top 468 most selective colleges while African-American and Hispanic student enrollment growth has been confined mostly to open-access schools.

African Americans and Hispanics are more and more enrolled in the underfunded, crowded, open-access, two- and four-year schools. Although relatively more African Americans are attending college, 72 percent are still concentrated in the least-funded institutions. The postsecondary education system made room for the arrival of many more African Americans and Hispanics by tracking them to the least resourced postsecondary tiers; 74 percent of Hispanic freshman enrollments are in the open-access, two- and four-year schools (see appendix B).

Another way to view the enrollment patterns shows polarization just as stark. Of the total 254,000 net new seats in the top 468 schools since 1995, 182,000, or 72 percent, of these seats went to white freshmen. African Americans gained 17,000 seats and Hispanics 25,000 seats for a total of 17 percent of the top schools' new capacities. ***This occurred at the same time overall enrollment gains for whites, African Americans, and Hispanics were relatively similar (see fig. 6):***

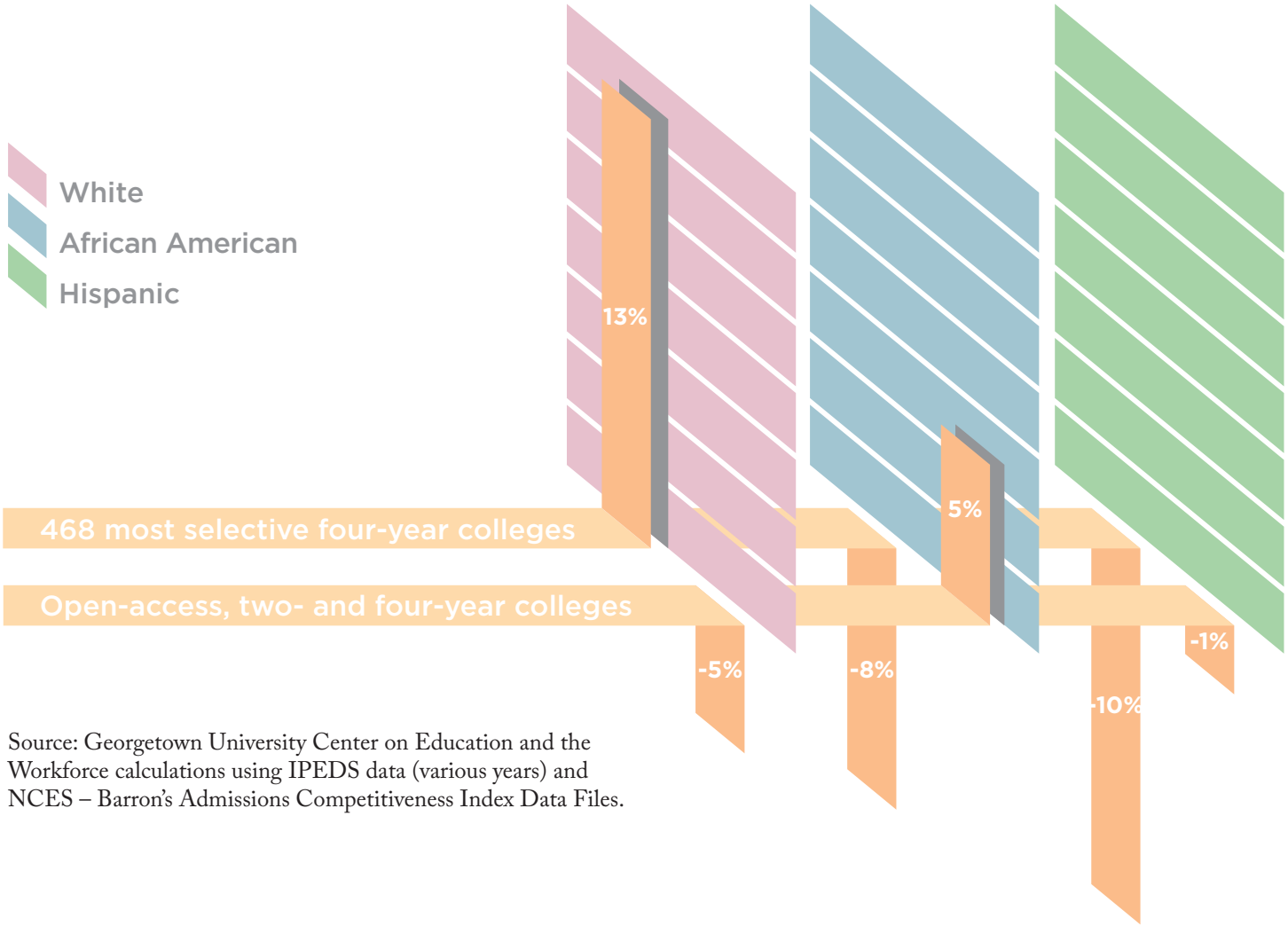
- 233,000 more students, or a 34 percent enrollment gain, for whites;
- 186,000 more students, or a 28 percent enrollment gain, for African Americans; and
- 192,000 more students, or a 29 percent enrollment gain, for Hispanics.



Source: Georgetown University Center on Education and the Workforce calculations using IPEDS data (various years) and NCES – Barron's Admissions Competitiveness Index Data Files.

Figure 6. Since 1995, white students captured most of the enrollment growth at the top schools (72%) but had no enrollment increases at the open-access schools. African Americans and Hispanics captured virtually all the enrollment growth at the open-access, two- and four-year colleges (92%) but very little of the enrollment growth at the 468 most selective colleges (17%).

Comparing enrollments to youth population shares, this polarization is even more evident. In 2009, the white share of enrollments in the top 468 schools was 75 percent, 13 percentage points above the 62 percent white share of the college age population (aged 18-24 years). Conversely, the white share in the open-access schools was 57 percent, 5 percentage points less than the white population share. For African Americans and Hispanics, who respectively had 15 percent and 18 percent shares of the youth population, the opposite holds. African Americans were underrepresented by 8 percentage points in the top schools and overrepresented by 5 percentage points in the open-access schools. Hispanics were 10 percentage points underrepresented in the top schools and 1 percentage points underrepresented in the open-access schools. (See appendix B for more detailed discussion of disproportionality and changing disproportionality.)



Source: Georgetown University Center on Education and the Workforce calculations using IPEDS data (various years) and NCES – Barron's Admissions Competitiveness Index Data Files.

Figure 7. As of 2009, relative to their share of the youth population, whites were overrepresented at the top schools; relative to their growing share of the youth population, African Americans and Hispanics were underrepresented.

These separate postsecondary systems produce unequal outcomes because the top 468 schools, dominated by white students, have higher graduation rates for all levels of test scores. These students have better chances of attending graduate school and better economic outcomes. In the overcrowded, underfunded, open-access system, where African Americans and Hispanics have enrolled en masse, the graduation rates are much lower; more students leave with a certificate or an Associate's degree; fewer go on to graduate schools; and overall these open-access schools provide much less economic benefit.

Part 2. Racial and Ethnic Polarization in Postsecondary Education Matters Because Resources Matter.

Resources, students, and colleges have been moving up in selectivity tiers since 1995. Whites have been moving up market, out of the inexpensive, resource starved, open-access colleges into the high tuition, better resourced, rich, top 468 colleges (see endnote 12). The more than 250,000 new students at the top colleges tend to arrive with money in hand and check-writing parents in tow. Over the same period more than 140 colleges have moved up from the less selective tiers into the higher tuition, top three Barron's tiers, increasing the top three tiers from 326 colleges in 1995 to 468 in 2009. As a result of an increased number of institutions, resources have increased with increasing enrollments.

Almost 300,000 students have moved into the low-funded, open-access schools but among the open-access, four-year colleges, the number of seats and schools have declined. Crowding in the low-spending, open-access colleges reduces completions even among students who have the same qualifications as many who attend the more selective colleges (see appendix A, and appendix B, tables 1 and 4).

There are significant differences in outcomes among equally qualified whites, African Americans, and Hispanics that derive from the increasing relegation of African-American and Hispanic students to the crowded, underfunded, open-access, two- and four-year colleges. Spending differences among postsecondary education institutions also compound the effects of cumulative underinvestment in education during childhood and adolescence that leave many African Americans and Hispanics unprepared for college.

As a result of these unequal flows of resources, students, and institutions, two separate and unequal systems have evolved in the postsecondary system. White students have captured a relatively greater share of the seats at the best schools. Compared to the more than 3,250 open-access, two- and four-year colleges, the 468 most selective colleges provide considerably more resources per student, leading to higher graduation rates, allowing greater access to graduate and professional degrees, producing higher lifetime earnings, and ultimately providing greater access for white students to managerial and professional elites (see fig. 8).

This study finds a highly textured hierarchy of selectivity and resources per student throughout the colleges and universities used in the data. The greatest divide in resources (as well as racial, ethnic, and class diversity) is between the most selective institutions and the open-access, two- and four-year schools. Selective institutions provide considerably more resources per student, including much higher full-time to part-time faculty ratios, higher completion rates, and greater access to graduate schools, even among equally qualified students.

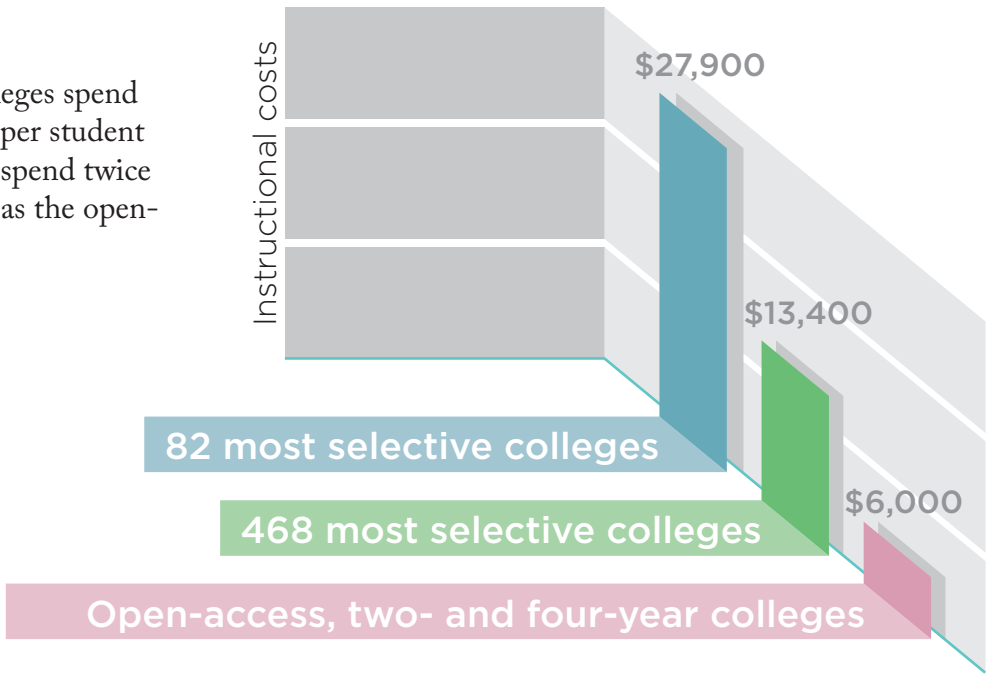


Figure 8. The 82 most selective colleges spend almost five times as much annually per student and the most selective 468 colleges spend twice as much on instruction per student as the open-access schools.

Source: Georgetown University Center on Education and the Workforce calculations using Delta Cost Project data (various years) and NCES – Barron's Admissions Competitiveness Index Data Files.

The differences among instructional costs reveal the disparity in resources:

- The 82 most selective four-year colleges spend $27,900 per student annually on instruction;
- The 468 most selective institutions spend $13,400 on instruction annually per student versus $6,000 per full time equivalent (FTE) student in annual instructional expenditures in the open-access schools;
- The completion rate for the 468 most selective four-year colleges is 82 percent, compared with 49 percent for open-access, two- and four-year colleges;
- Graduation from selective colleges results in higher rates of acceptance at graduate and professional schools among equally qualified students;
- At top-tier colleges, students who enrolled with SAT scores over 1200 are admitted into graduate school at a rate of 48 percent, compared with a 26 percent acceptance rate for similarly qualified students who attended an open-access, four-year college; and
- Thirty-five percent of students from top-tier schools obtain a graduate degree within 10 years of obtaining a Bachelor's degree, compared with 21 percent of students from the open-access schools (see fig. 9 and fig. 10).

Source: Georgetown University Center on Education and the Workforce calculations using IPEDS data (various years) and NCES – Barron's Admissions Competitiveness Index Data Files.

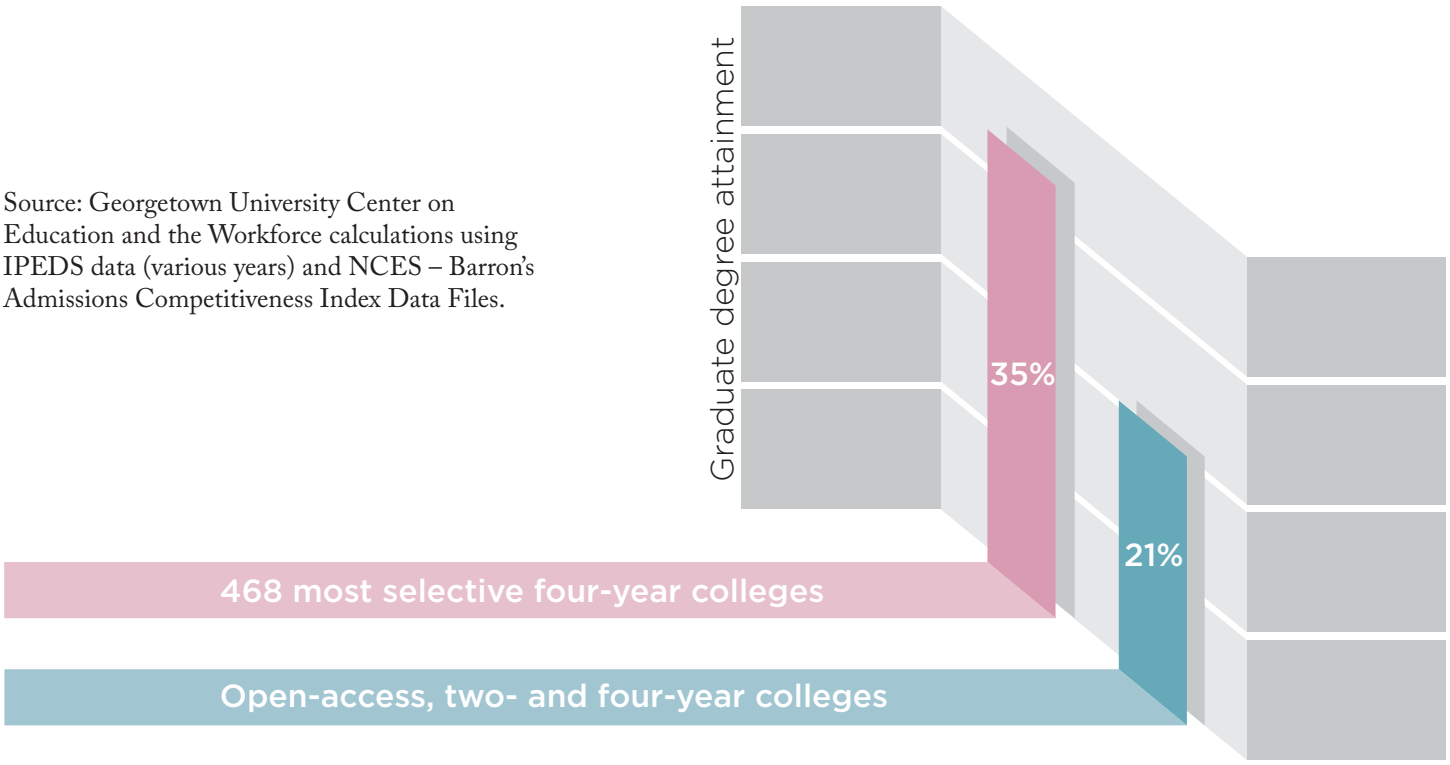
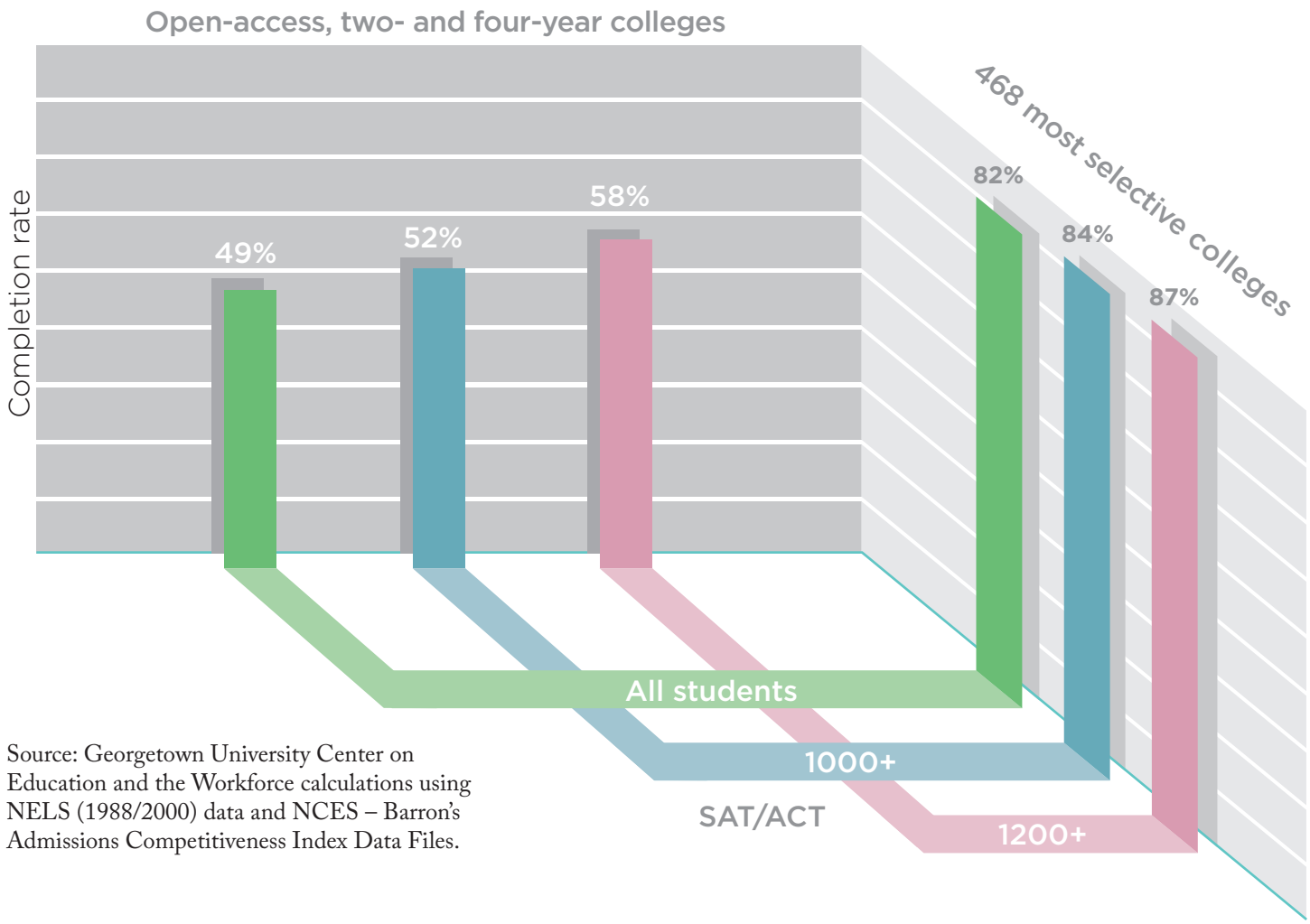


Figure 9. Recipients of Bachelor's degrees from the top schools get graduate degrees at a rate of more than one and a half times that of similar recipients from open-access colleges.



Source: Georgetown University Center on Education and the Workforce calculations using NELS (1988/2000) data and NCES – Barron's Admissions Competitiveness Index Data Files.

Figure 10. Equally qualified students have a higher graduation rate at the more selective schools with better resources.

Attending the top schools in the country gives students, regardless of their test scores, a much better chance of graduating from college compared to attending open-access schools. The differences in graduation rates and subsequent better chances of attending graduate school translate to earnings advantages. These findings run counter to the "overmatching" argument, which posits that minorities are better off in schools where median test scores are closer to their own. ***African Americans and Hispanics clearly benefit by going to selective institutions even when their test scores are substantially below the institutional averages at those schools (see fig. 11).***

Source: Georgetown University Center on Education and the Workforce calculations using NELS (1988/2000) data and NCES – Barron's Admissions Competitiveness Index Data Files.

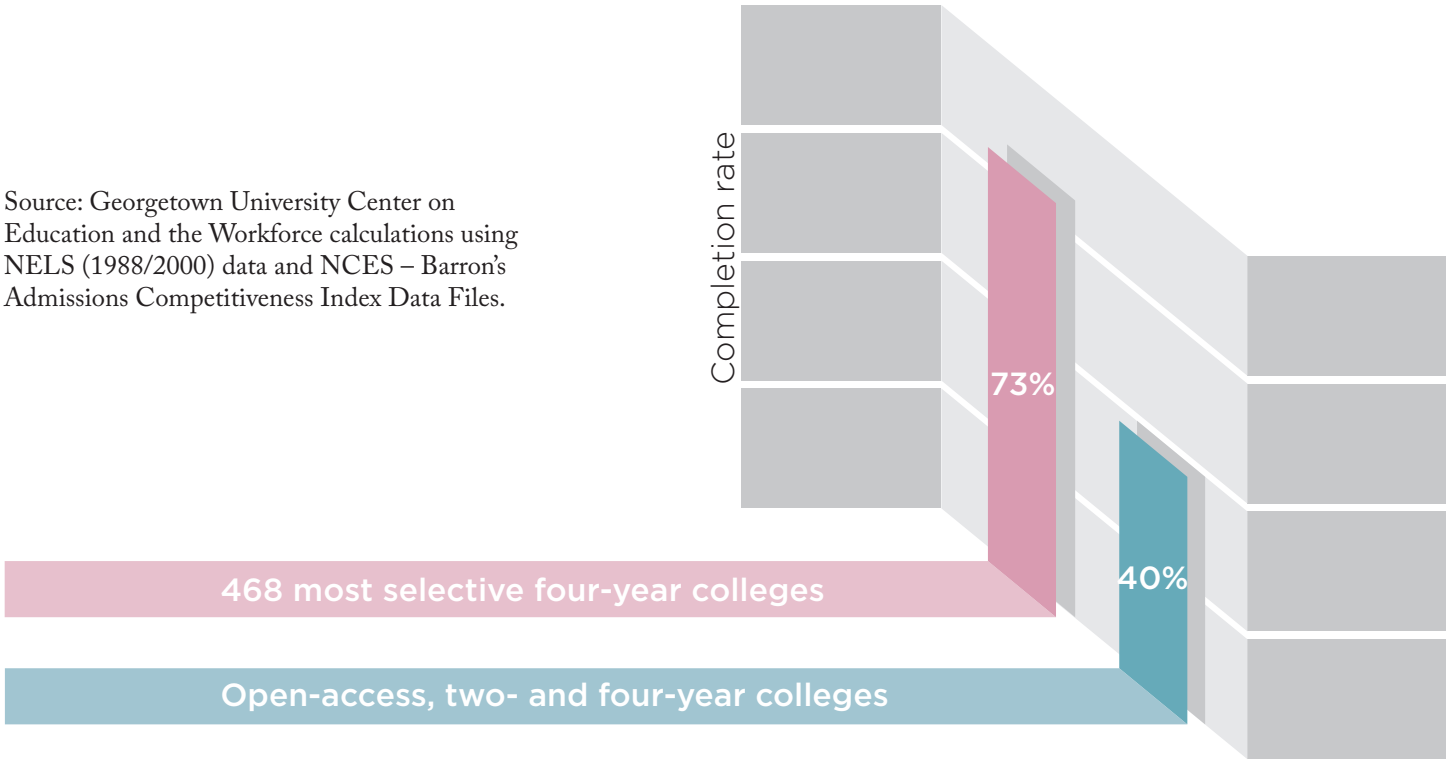


Figure 11. African-American and Hispanic students with above average SAT/ACT scores graduate at a rate of 73 percent from the top colleges, compared with a graduation rate of 40 percent at the open-access schools.

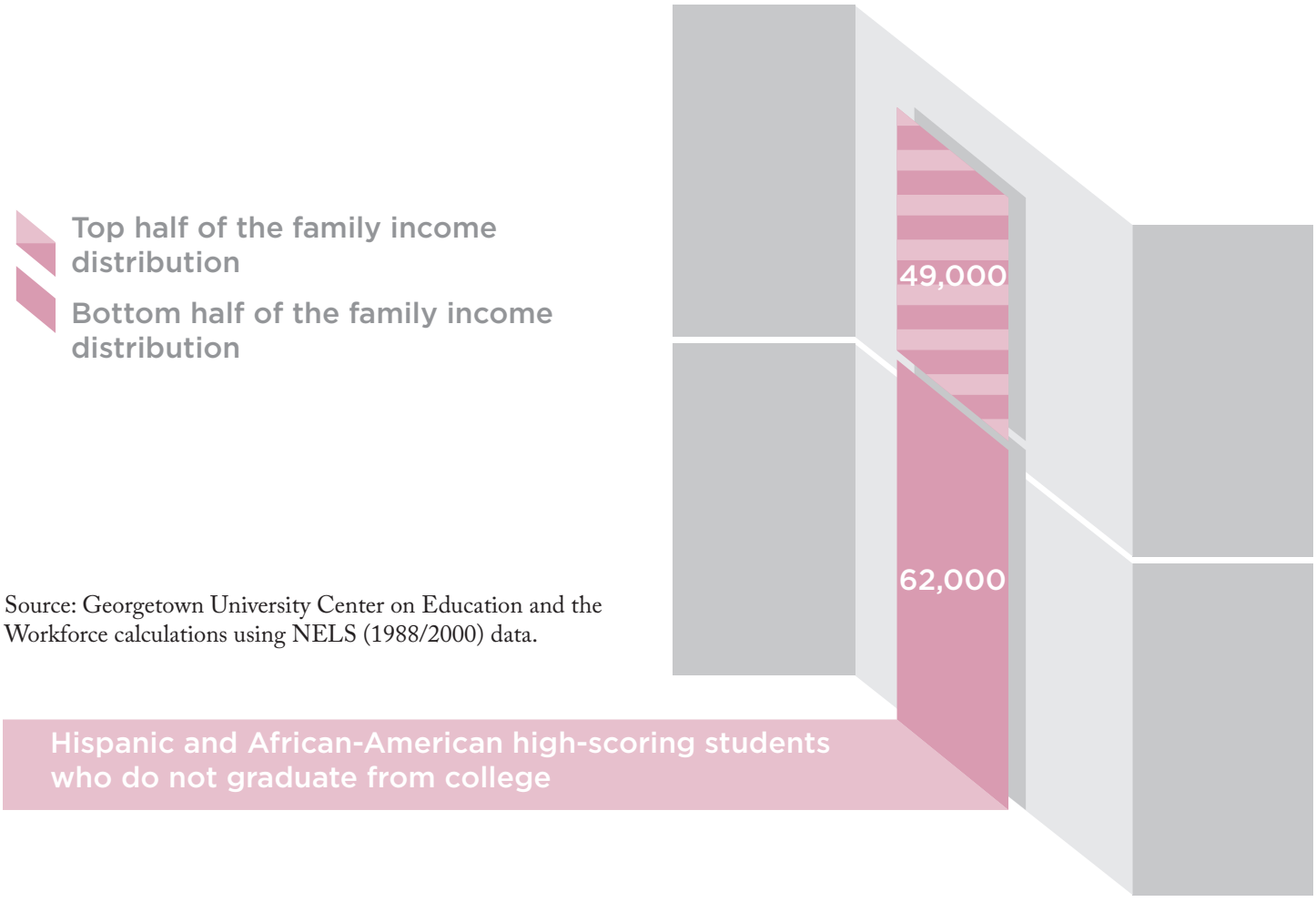
In the end, the separate paths are unequal in terms of the earnings advantages that white graduates, who predominate at the top schools, gain and pass on to their offspring. This includes schooling as well as expectations of educational attainment. Children from families headed by college dropouts obtain Bachelor's degrees or better only 26 percent of the time, while children from families headed by those with professional degrees and PhDs get a Bachelor's degree or better 73 percent of the time (see endnote 7).

Part 3. The Racial Bias in Postsecondary Education Persists Even When Accounting for College Readiness.

Compared with equally qualified white students, African-American and Hispanic students not only have less access to postsecondary education in general, but in addition less access to the 468 elite colleges, less access to Bachelor's degrees, and less access to graduate degrees.

College readiness is clearly a factor in explaining differences in African-American and Hispanic students' access to selective education. But this study's data clearly show that race matters, even controlling for readiness — high-scoring African Americans and Hispanics go to college at the same rates as similarly high-scoring whites but drop out more often and are less likely to graduate with a Bachelor's degree.

This dynamic leads to a significant loss of talent. This study's analysis demonstrates that each year 111,000 African-American and Hispanic students from the top half of the nation's high school graduating classes don't obtain a college degree within eight years of graduation (see fig. 12). This is a "loss" rate of more than half, 56 percent, of the top-scoring African Americans and Hispanics, which compares with a "loss" rate of 37 percent among the top-scoring white high school students. About 62,000 of these high-scoring African Americans and Hispanics come from the bottom half of the family income distribution (see appendix C).

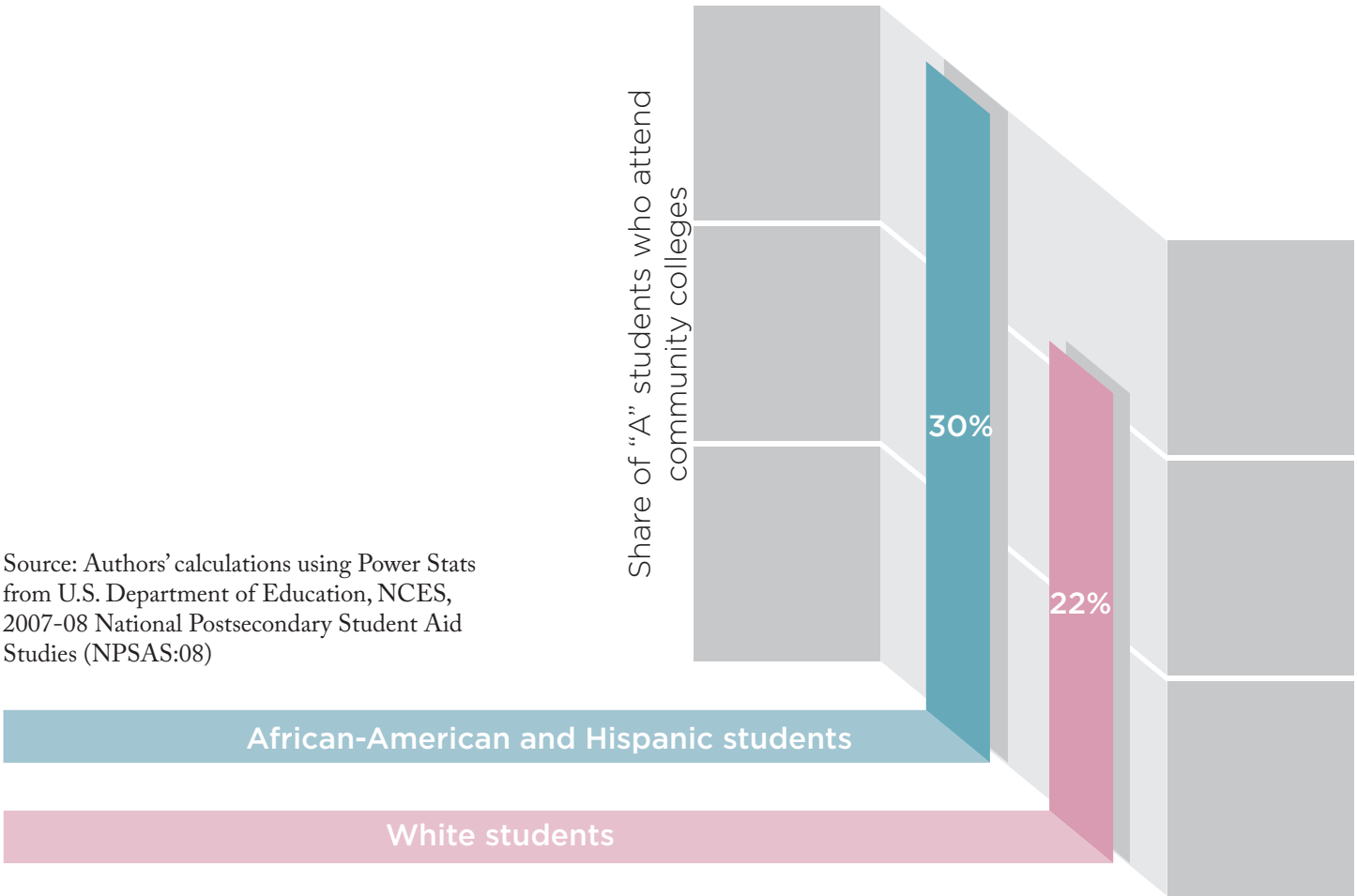


Source: Georgetown University Center on Education and the Workforce calculations using NELS (1988/2000) data.

Figure 12. There are 111,000 African Americans and Hispanics who graduate from the top half of the nation's high schools but do not graduate from college; 62,000 of them come from the bottom half of the family income distribution.

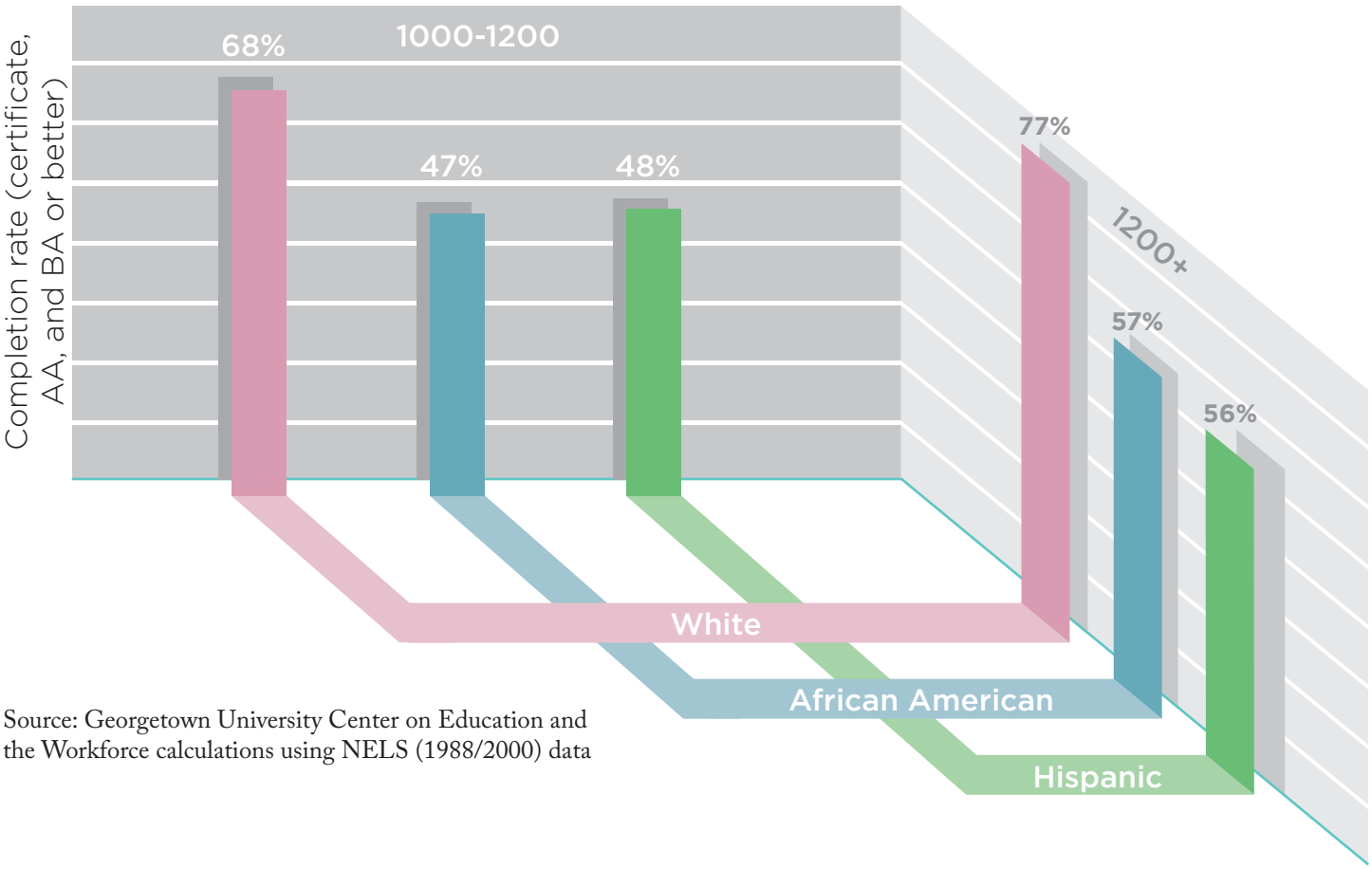
Race and ethnicity also matter in the type of institution attended, even among equally qualified students. About 53 percent of white students were enrolled in open-access two-and-four year colleges in 2009 versus 72 percent of African-American students and 74 percent of Hispanic students (see appendix B).

Figure 13 shows that even among students with high school GPAs of 3.5 or higher ("A" student), a much larger share of African-American and Hispanic students attend two-year institutions. Thirty percent of African Americans and Hispanics and 22 percent of whites attend two-year colleges. Just by themselves, these separate pathways help to explain why minorities, especially African Americans, tend toward stopping out with certificates and Associate's degrees, which then lead to large lifetime earnings deficits compared with similarly qualified students who attain Bachelor's degrees or better (see fig. 14).



Source: Authors' calculations using Power Stats from U.S. Department of Education, NCES, 2007-08 National Postsecondary Student Aid Studies (NPSAS:08)

Figure 13. Among students with an A average in high school, 30 percent of African-American and Hispanic students attend community college, compared to 22 percent of white students.



Source: Georgetown University Center on Education and the Workforce calculations using NELS (1988/2000) data

Figure 14. Regardless of SAT/ACT scores, whites have higher graduation rates for certificates and degrees (Associate's, Bachelor's, and graduate degrees) than equally qualified African Americans or Hispanics.

Students in the top half of the nation's high school test-score distribution attend postsecondary institutions at the same rate, regardless of race and ethnicity, but completion rates favor whites compared with equally qualified minorities:

- White, African-American, and Hispanic students from the top half of the nation's high schools go to college at the same rate (90%) (see fig. 15);
- Among those who go to college, 70 percent of white students get a certificate, an Associate's degree, or a Bachelor's degree or better; 52 percent of African-American and 49 percent of Hispanic students attain those degrees (see fig. 16);
- Among these high-scoring high school students who attend college, 9 percent of African-American students end their academic career after earning just a certificate versus 6 percent of Hispanic students and 5 percent of white students. (see appendix C); and
- Among these top-scoring high school students who get a certificate, an Associate's degree, or a Bachelor's degree, 81 percent of whites obtain a Bachelor's degree or better, while 72 percent of African Americans and 73 percent of Hispanics obtain a Bachelor's degree or better (see fig. 17).

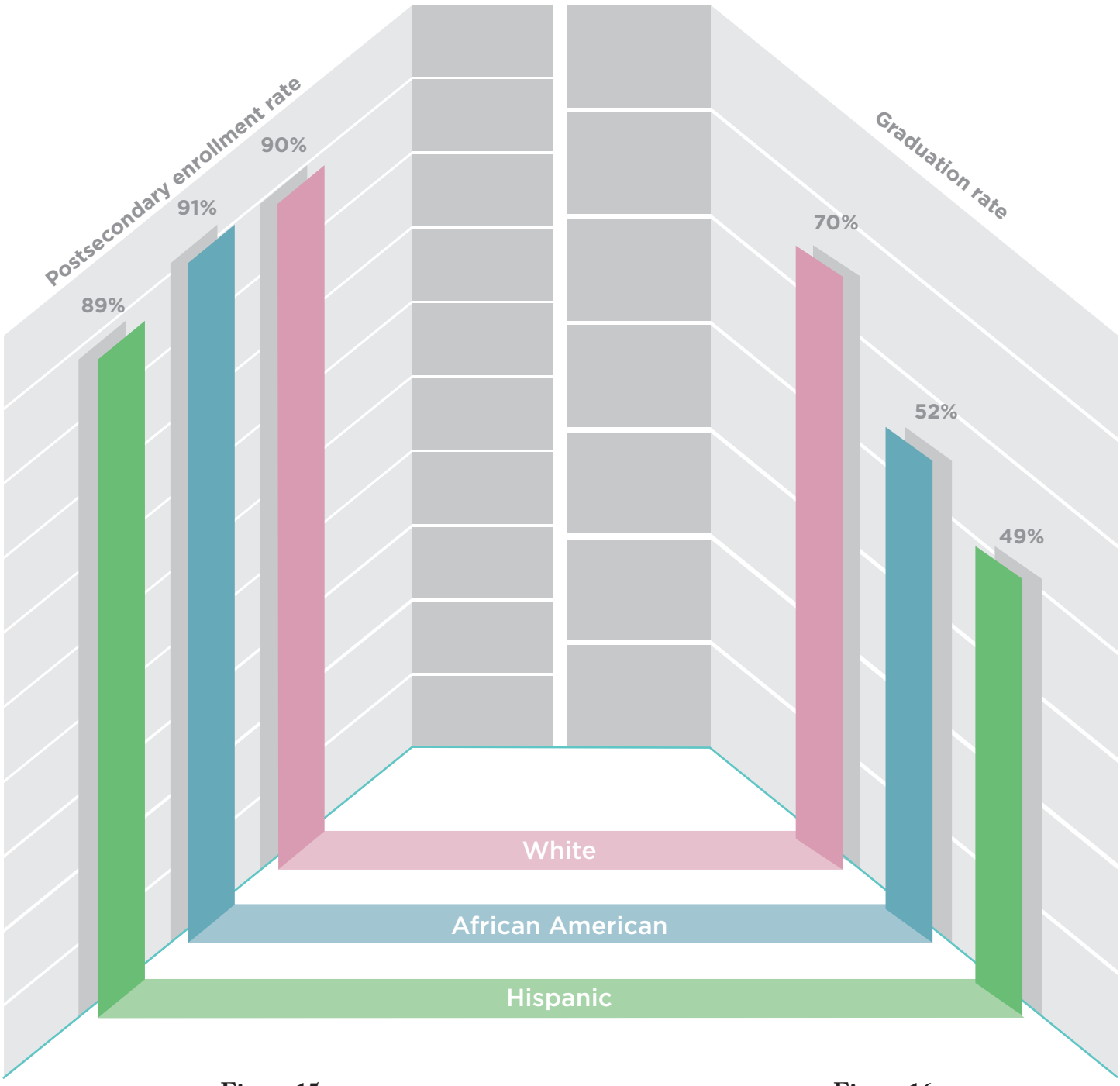


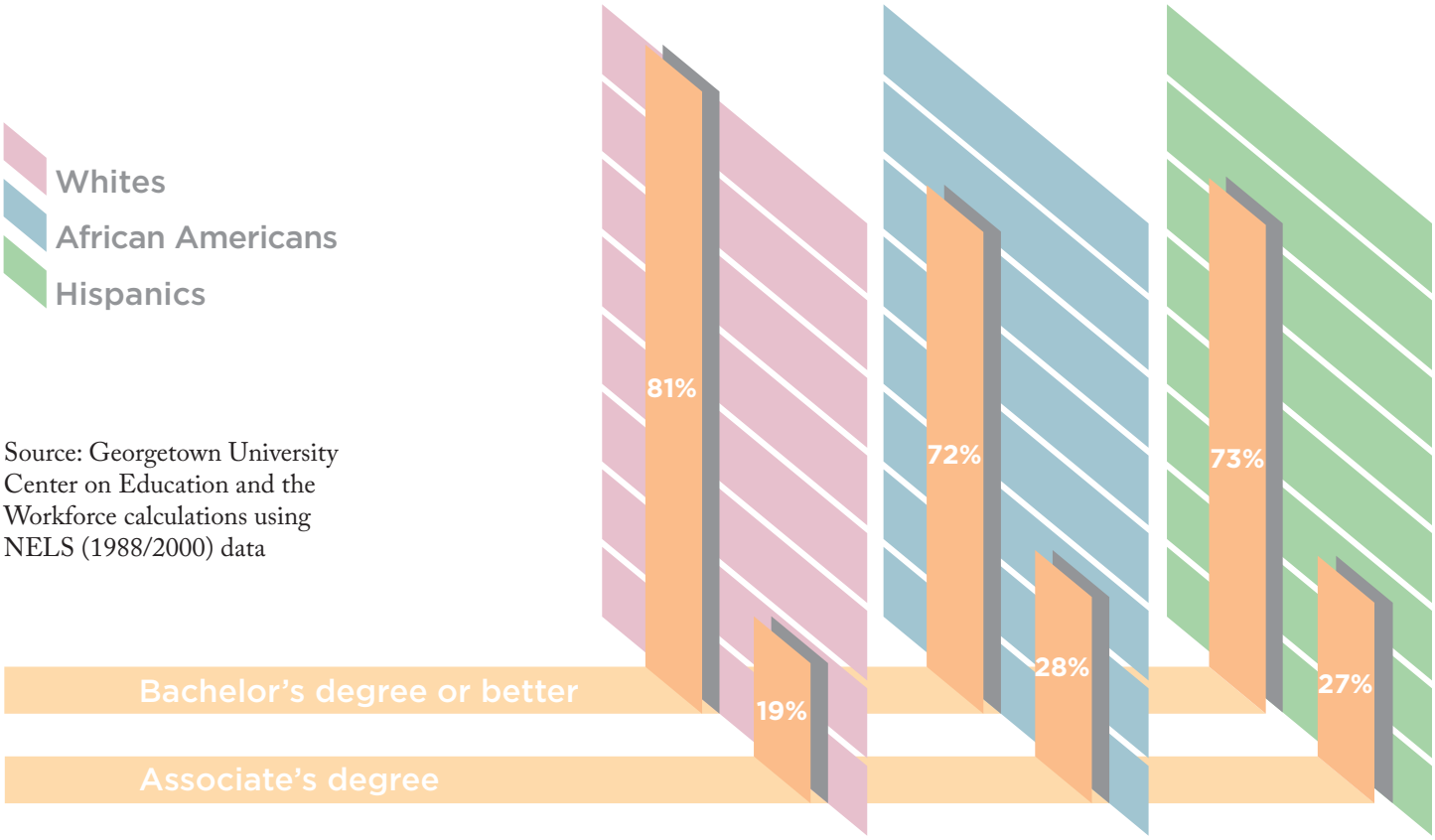
Figure 15.

High-scoring whites, African Americans, and Hispanics attend college at the same rate.

Figure 16.

High-scoring whites complete college at a much higher rate than similarly qualified African Americans or Hispanics.

Source: Georgetown University Center on Education and the Workforce calculations using NELS (1988/2000) data



Source: Georgetown University Center on Education and the Workforce calculations using NELS (1988/2000) data

Figure 17. Whites with test scores in the top half of their school class who earn a postsecondary award earn a Bachelor's degree or better more often than African Americans or Hispanics.

The Bachelor's degree is the tipping point in the educational hierarchy where racial differences begin to decline appreciably. For example, racial and ethnic inequality diminishes significantly in the transition to graduate school. But postsecondary stratification limits Bachelor's degree attainment among minorities, restricting them to the educational levels where inequality is strongest; even among whites, African Americans, and Hispanics with the same test scores:

- In general, African-American and Hispanic students are more likely to get a certificate or an Associate's degree and less likely to get a Bachelor's degree because they are concentrated in the open-access, two- and four-year colleges;
- Controlling for student preparation and other personal characteristics, a little less than half of minority students do not complete a Bachelor's degree because of lack of resources and other forms of support;
- African Americans and Hispanics who attain Bachelor's degrees at the 468 most selective colleges go on to graduate school at a rate of 33 percent, nearly the same as the rate of white students (34%); and
- African-American and Hispanic students who earn Bachelor's degrees from the open-access, four-year colleges go on to graduate school less frequently than those who go to the 468 most selective colleges, but a higher share of these students go on to graduate school than white students who graduate from the open-access four-year schools (see fig. 18).

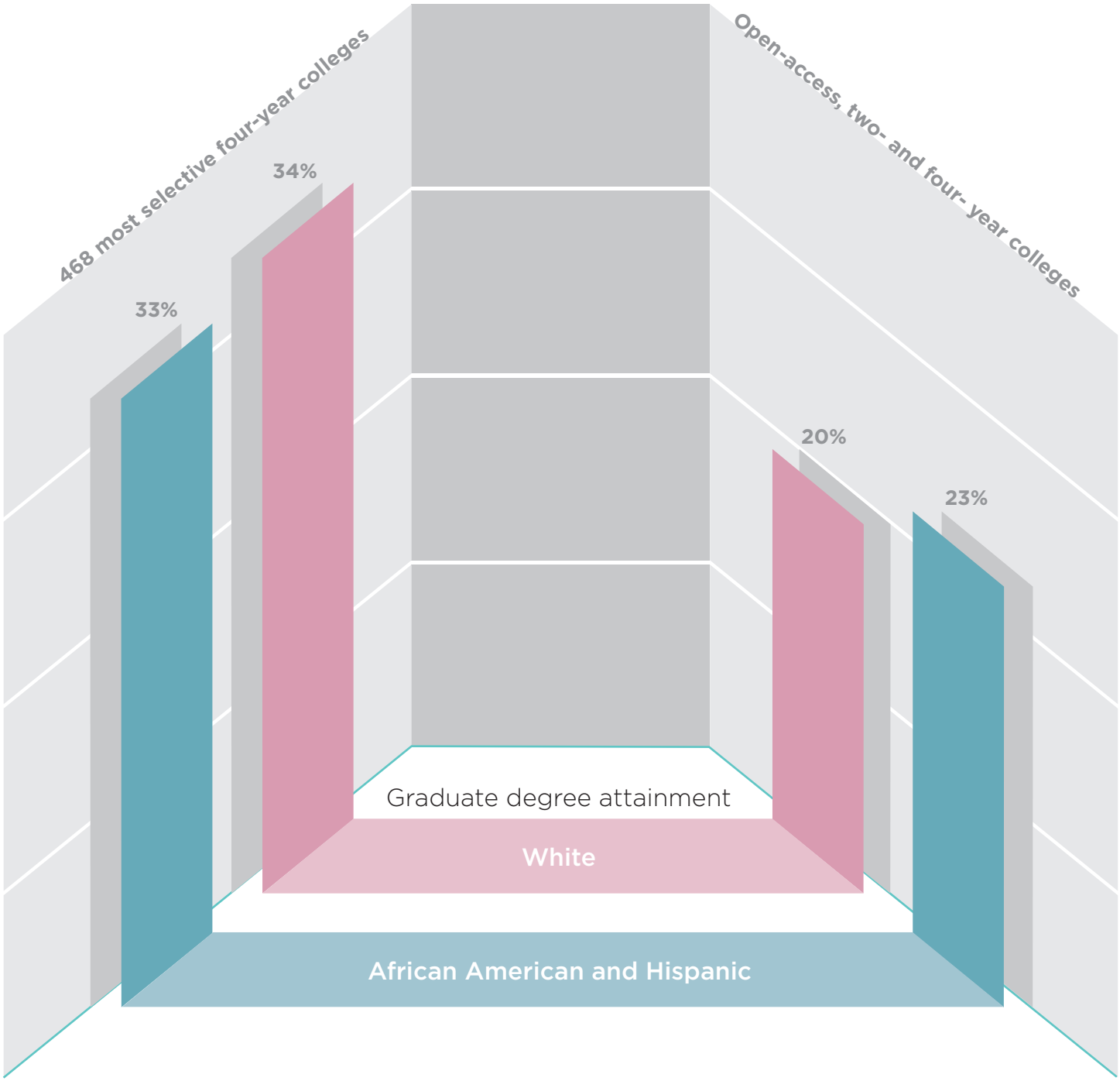


Figure 18. The Bachelor's degree is the threshold where racial and ethnic differences in educational attainment begin to decline.

Source: Georgetown University Center on Education and the Workforce calculations using NCES – Baccalaureate and Beyond (1993/2003) data and NCES – Barron's Admissions Competitiveness Index Data Files.

Part 4. Both Race and Class Matter in Determining Postsecondary Outcomes, but Race and Class Are Not The Same Thing.

Clearly class is a powerful cross-cutting factor in explaining postsecondary differences among all students. ***Yet, controlling for income, race matters:*** taken together, lower-income African-American and Hispanic students just don't do as well as lower-income whites. We find that white students (45%) in the lower half of the family income distribution drop out of college much less frequently than African Americans (55%) and Hispanics (59%). These lower-income whites get Bachelor's degrees at nearly twice the rate of African Americans and Hispanics and obtain many fewer sub-baccalaureate degrees. In particular, African-American students get substantially more certificates.

Class and race overlap and are most virulent in combination. Along with many other researchers, we find that the reason for persistent racial inequality begins with the fact that African Americans and Hispanics seem to face barriers not faced by whites. Unequal educational and career outcomes for economically disadvantaged whites can be explained with variables like family income, parental education, and peer expectations. These same variables ***do not fully*** explain African American and Hispanic educational and economic outcomes. Earlier research shows income effects are more fully explained by observable things, like peer group and tutoring, while differences by race are not so easy to pin down. The preponderance of evidence supports the premise that the disadvantages of race and income must be considered separately in most cases. Yes, differences in readiness and income explain differences in academic and life outcomes; but, independently, so do race and ethnicity.

How Do We Choose?

If we are to reverse the polarization of the postsecondary system and achieve some measure of racial and economic diversity, some combination of class-based and race-based admissions criteria are ultimately required. Intergenerational inequality is powered by both class and race, but class and race are not the same thing. Inequality is not race-blind. The effects of race are remarkably stubborn, even in the face of social and economic improvements among African Americans and Hispanics. Race and ethnicity have independent negative effects on educational achievement and career opportunity largely because of the continued geographic isolation of minorities, especially African Americans, even as family incomes improve.

In the real world race-based and class-based disadvantages overlap substantially but do not substitute perfectly for each other. Race and class are separable and complementary in their negative effects on educational and economic success. The more vulgar forms of overt bigotry have waned dramatically. While racial biases still exist, they are more subtle and unconscious rather than overt and intentional.[18] Class issues have come to the forefront of the national dialogue with the overlap between educational and income inequality since the 1980s. Meanwhile the stubborn persistence of racial disadvantages among African Americans and their extension to a burgeoning Hispanic population have kept the race issue alive.

Disadvantage is worst of all when race and class collide. African Americans and Hispanics are especially vulnerable to class-based economic disadvantages because they are more highly concentrated in low-income groups and because race seems to add power to the negative effects of low-income status and degrade the positive effects of income and educational improvements. The interaction between race and class creates the most powerful brew for limiting upward mobility and accelerating downward mobility in economic and educational status across generations. Minorities are disproportionately harmed by increasing income inequality because they are often trapped in jobless enclaves and lower-wage job sectors that make them more vulnerable to any kind of social or economic threat. Because of their isolation, minorities, especially African Americans, don't benefit as much as whites from generational improvements in educational attainment or income growth.

We find that there are plenty of high school students who meet both race- and class-based criteria and would benefit substantially from the higher resources per student, greater completion rates, better access to graduate school, and more favorable labor market outcomes associated with access to the top 468 colleges.

Our study finds that more than 240,000 high school students every year, who graduate in the top half of their high school class and come from the bottom half of the family income distribution, do not go on to one of the top 468 colleges and do not get a two- or four-year degree within eight years of graduation from high school. The data show that about one in four (62,000) of these high-scoring/low-income students who don't earn a degree are African American or Hispanic.

The notion that class-based admissions preferences can substitute for race-based preferences is enormously attractive in political terms. Admissions criteria that are race-blind but could produce both race- and class-based diversity would be much more popular than race-based criteria all by themselves, as the recent Supreme Court ruling in *Fisher v. University of Texas* attests. While politically attractive, the direct substitution of class for race-based preferences does not yield the same numbers of African-American and Hispanic candidates as a more direct reliance on race-based admissions.[19] In general, this is because the pool of white low-income students is so much larger than the pool of African-American and Hispanic students available for selective college admissions.

If race is prohibited in the admissions process, simple metrics of class, based on family income alone, would make it difficult to maintain current or higher levels of racial diversity because low-income minorities would

represent a relatively small share of the lower income pool. Thomas J. Kane (1999), for example, estimates that more than six times the current level of class-based admissions would be necessary to maintain the current racial mix in the most selective colleges.[20]

This study arrives at similar findings. Even when we restrict the pool of low-income students with average high school test scores to those who don't get a degree within eight years of graduation, the ratio of African Americans and Hispanics to other similarly qualified students is almost five to one, very close to Kane's more general finding above.

The ability of the current postsecondary system to accommodate such a large inflow of low-income students in the more selective colleges would be difficult given the prestige driven competition for students with the highest test scores that governs higher education selectivity. It would also require increased financial aid well beyond the reach of all but the few wealthiest elite colleges.

If forced to use income-based admissions criteria alone, with no race-based criteria or race-based proxies, the sheer number of low-income student admissions necessary to generate the current racial diversity in the selective colleges would be daunting. Simple income metrics do not capture the distinctive aspect of racial disadvantage achieved by using more sophisticated socioeconomic metrics that reflect (a) the spatial and educational isolation that occurs when race and class disadvantages combine and (b) the severity of race and class disadvantage.

Some class-based metrics that reflect class-based disadvantages in their most extreme form, like spatial isolation by race and class, differences in wealth, family structure, parental education, and occupational status, can translate into proxies for race in college admissions.

It is difficult to parse the point where racial discrimination ends and economic deprivation begins, but the evidence is clear that both negatively affect educational and economic opportunity and are most powerful in combination. It is the interaction of race and class disadvantages that result in the spatial, social, and economic isolation that epitomize persistent hardship.

Class Rank Approaches: Racial isolation can be an effective metric of class disadvantage. An example would be the use of class rank as an effective proxy for race in the ongoing brawl over race-based affirmative action: The current legal standard in affirmative action, established in *Grutter v. Bollinger* and affirmed in *Fisher v. University of Texas* is that racial diversity is a legitimate goal for college admissions but race alone cannot be used as a standard for admission. Because of the spatial isolation of minorities, targeting specific geographic areas or high schools can produce racial diversity without using race alone as an admissions criterion.

Spatial isolation of low-income minorities is what accounts for the relative success of the Texas affirmative action system, which guarantees admission for any student in the top 10 percent of his or her high school class. The Texas 10-percent solution does not use race alone, but still allows substantial racial diversity in the Texas postsecondary system because it is predicated on continued racial and economic segregation in particular areas and high schools.

Several states have moved toward affirmative action strategies which emphasize the spatial and educational isolation that come from the interactions between race and class by guaranteeing admission to all in-state students who graduate from high school in some top percentage of their class. Such programs have found favor among those who are looking for ways to balance merit and greater equality of opportunity to learn with race, ethnicity, and income level.

These class rank approaches narrow the merit-based competition for seats at selective colleges to individual high schools, thereby recognizing and partially compensating for the negative effects of racial and economic isolation on school performance. In one sense, the strategy represents a pragmatic compromise between the values of rewarding individual merit and opening avenues to success for racial, ethnic, and low-income groups. In concept, class rank approaches represent a rough ordering of moral priorities. They are merit-based but not indifferent to the effect of inequality in the opportunity to learn on admissions procedures and racial, ethnic, and class outcomes.

As shown in a previous study (Carnevale and Rose, 2004), the U.S. public supports admissions plans that reward students who rank high in their own high schools. More than 75 percent of Americans agree that low-income students who get the best grades in their high schools should be given preferences in admission to college (although existing class rank plans do not require beneficiaries to be poor). More than 50 percent of Americans agree that low-income students with the best grades or test scores in their high schools should be admitted, despite the fact that students in other high schools might have higher grades and scores.

Class rank approaches do come with challenges. High class rank approaches add considerable social diversity to the eligibility pool for top colleges, but delivering on racial diversity is more complicated. Class rank approaches create eligible pools that are often larger than the quantity of seats available, especially if class rank approaches attempt to be completely race-blind, because the sheer numbers of African Americans and Hispanics in the pool are more impressive than their percentages of the whole. Hence in some phase of the admissions process extra attention needs to be given to race if racial diversity is to be maintained.

Class rank approaches can result in lower graduate rates relative to the overall graduation rates in top colleges if remediation and other forms of student support are inadequate. Not all students in the top ranks of their high school classes are equally prepared for the academic rigors of a selective college Bachelor's degree. Eighteen percent of those in the top fifth of their high school class do not take a college entrance exam, and 15 percent score below 1000. Without assistance these enrollees might have a graduation rate as low as 50 percent, much lower than the current graduation rate (82%) at selective colleges.

Another potential problem with the class rank approach is "creaming," even within schools where most students have lower socioeconomic status or minority backgrounds. Virtually all high schools include students from a variety of socioeconomic strata. Even in the least affluent high schools nationwide fully one-third of students come from the top two economic quartiles. Moreover, those in the top 10 percent by grades are disproportionately wealthy.

Wealth-Based Approaches: A second approach to affirmative action that does not rely on race alone focuses on wealth, the deepest class-based difference between whites and disadvantaged minorities. Income statistics reflect short-term earnings differences but do not show the full extent of racial inequality tied to spatial isolation and long-term disadvantages. In 2010, for example, the income of whites was twice that of Hispanics, but whites had on average six times the accumulated wealth of African Americans and Hispanics.[21] On average, whites hold $632,000 in wealth compared with $98,000 and $110,000, respectively, for African Americans and Hispanics. Wealth is one among many race-neutral factors that measure the extent to which African Americans and Hispanics lag behind whites in purely socioeconomic terms. Many others include:

- ***Student factors such as hours worked;***
- ***Family factors such as parental education and family structure;***
- ***Neighborhood factors attached to Census tract codes such as educational attainment and crime rates; and***
- ***School factors such as test scores, graduation rates, and percentage participation in subsidized school lunch programs.***

Ultimately, schemes based on socioeconomic factors like wealth and place-based metrics such as class rank meet current legal requirements under *Grutter v. Bollinger* that allow race as a diversity goal so long as institutions do not use "race alone." But in an environment that requires not using race or racial proxies at any juncture in the selection process, it would be much more difficult to use class rank, wealth, or other proxies for race. In both cases large selection pools can be generated but minorities represent a relatively small share of eligible students relative to whites. A random draw from the pool would yield relatively few minorities compared with current racial diversity or compared with the growing minority share of the traditional college age population (aged 18-24).

While affirmative action, both race- and class-based, seems clearly justified as a device to encourage race and class mobility and compensate for persistent racial and economic inequality, it is not clear that affirmative action as it has been known is a remedy that gets at the deeper root of race-based and class-based inequality.

In combination, both race- and class-based affirmative action can ensure that highly qualified African-American, Hispanic, and lower-income students gain access to well-funded and selective colleges that lead to elite careers. Affirmative action, whether it is race- or class-based or some combination of the two, can help out those who strive and overcome the odds yet does relatively little to change the odds themselves. These economic and educational mechanisms are color-blind in theory but not in fact. They are nested together in ways that make their combined negative effects mutually reinforcing, resilient, and superficially legitimate as racial and ethnic barriers to opportunity. While these mechanisms appear color-blind and class-neutral, they persistently produce educational and economic outcomes that have a disparate negative impact on African-American, Hispanic, and low-income students.

In general, this analysis confirms two obvious facts about the American educational pipeline. First, the odds against students from less affluent families and schools, either in applying or being selected for entrance into selective colleges, are higher than for students from better off families and schools. Second, numerous students have the proven ability to beat those odds. By themselves, admissions policies will not change the percentages drastically. Leveling the playing field is a challenge for education, economic, and social policymakers. But admissions policies can promote social mobility and student diversity at the margins of social change by emphasizing outreach to students who have beaten the odds by overcoming their socioeconomic origins and achieving their educational goals in unfavorable environments.

Still, there is evidence from states like California, Texas, and Florida, where racial affirmative action has been banned at public universities, that the higher education community will take aggressive steps, including economic affirmative action, to ensure racial diversity in a relatively race-neutral manner if using race is not an option. Moreover, the model presented here assumes race-neutral recruiting, so bold outreach efforts by race or poverty concentrations could improve racial diversity beyond expectations, even if race is banned from admissions decisions themselves. Likewise, new efforts to reduce the racial gap at the K–12 level might work over the long run. But ultimately there is no better way to guarantee a certain level of racial diversity than by employing race per se at some juncture in the selection process.

Endnotes

1. Concern for the growing effect of college access and selectivity on earnings inequality, especially by class, is well established. See Hout, "Educational Progress for African Americans and Latinos in the United States from the 1950s to the 1990s: The Interaction of Ancestry and Class," 1999; Gamoran, "American Schooling and Educational Inequality," 2001; Karen, "Changes in Access to Higher Education in the United States, 1980–1992," 2002; Carnevale and Rose, "Socioeconomic Status, Race/Ethnicity, and Selective College Admissions," 2003; Leonhardt, "As Wealthy Fill Top Colleges, Concerns Grow Over Fairness," 2004; Astin and Oseguera, "The Declining 'Equity' of American Higher Education," 2004; Selingo and Brainard, "The Rich-Poor Gap Widens for Colleges and Students," 2006; Fischer, "Mass. Merit Aid Fails to Increase Access," 2006; Fischer, "Elite Colleges Lag in Serving the Needy," 2006; Smith, "Four Decades of Survey Data on American Freshmen Reveal Widening Socioeconomic Gap," 2007; Wyner, et al., *Achievement Trap: How America Is Failing Millions of High-Achieving Students from Lower-Income Families*, 2007; Hoxby, "Changing Selectivity," 2009; Sacks, "How Colleges Perpetuate Inequality," 2007; Sacks, *Tearing Down the Gates,* 2007; Roksa, et al., "Changes in Higher Education and Social Stratification in the United States," 2007; Bastedo and Jaquette, "Institutional Stratification and the Fit Hypothesis," 2007; Hoxby and Avery, "The Missing 'One-Offs': The Hidden Supply of High-Achieving, Low Income Students," 2012.

2. The closer the data on postsecondary education are examined, the more stratification is found. Non-degreed postsecondary certificates tend to go disproportionately to African Americans and Hispanics (see Carnevale, et al., *Certificates: Gateway to Gainful Employment and College Degrees*, 2012). Even among the top 468 colleges, spending on instruction is roughly lower by half where African Americans and Hispanics are concentrated (unpublished CEW analysis of Delta Cost Project data: various years). A study by Goldrick-Rab and Kinsley shows substantial racial segregation among community colleges (see "School Integration and the Open Door Philosophy," 2013). The stratification continues within institutions in the distribution of college majors with white males disproportionately enrolled in fields with the highest labor market value relative to African Americans, Hispanics, and women (see Carnevale, et al., *What's It Worth? The Economic Value of College Majors*, 2011).

3. This study uses the top 468 most selective colleges, the aggregation of the three top tiers of Barron's Admissions Competitiveness (aka selectivity rankings). The number of colleges in the top tiers, as well as the entire system, has grown over time. In 1992 there were 399 colleges in the top tier. We have chosen to reference the top colleges by the number of institutions in 2009 to keep focus on the fact that our systems analysis is not about a rarefied group of selective schools (e.g., the Ivy League), but that a polarization is occurring in a large sector with results clearly distinguished from the rest of the system. (See appendix A for details on how selectivity is defined and details on the growth in the number of colleges in each tier. See appendix B for details on enrollment growth and flows by levels of selectivity.)

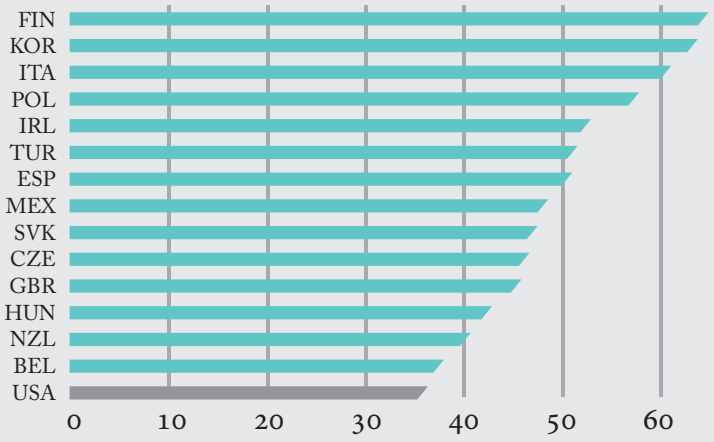
4. There is diverse literature on access and differentiation

focused on K-12 education. See Oakes, "Commentary Access and Differentiation: Structuring Equality and Inequality in Education Policy," 2009. Also, see related research on the effects of sub-baccalaureate education as a barrier to Bachelor's degree attainment including Clark, " 'Cooling-Out' Function," in Higher Education," 1960; Clark, " 'Cooling-Out' Function Revisited," 1980; Brint and Karabel, "The Diverted Dream," 1989; and Rileybahr, "Cooling Out in the Community College," 2008.

5. This number reflects the difference in the median lifetime earnings of a person with some college and no degree ($1,547,000) and someone with a professional degree ($3,648,000). See Carnevale, et al., *The College Payoff*, 2011.

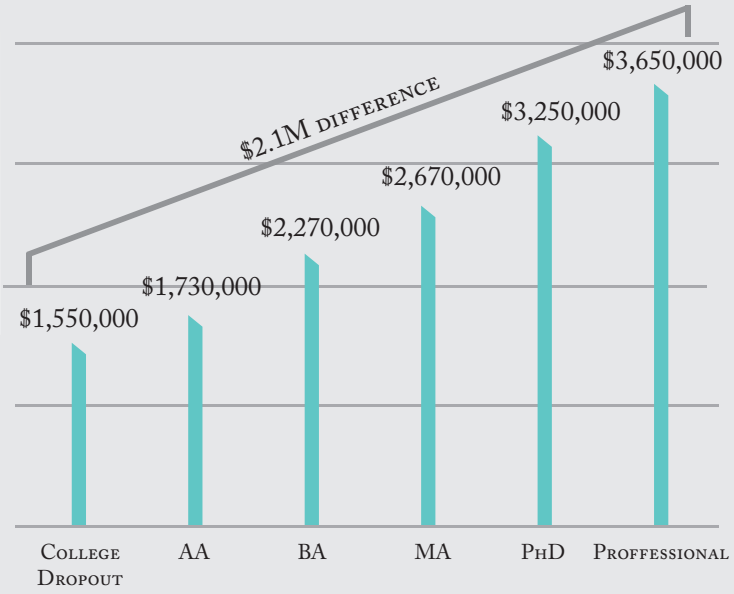
6. The empirical evidence shows that parental education is now more important than family income in determining a child's future opportunity (see Reardon, "The Widening Academic Achievement Gap between the Rich and the Poor," 2011). In the postindustrial economy, access to high-quality postsecondary education and occupational preparation has become a primary mediating mechanism in allocating intergenerational transmission of economic opportunity. To a growing extent, postsecondary attainment has displaced the industrial concept of class as the primary marker for social stratification across generations. For example, students whose parents don't go past high school only graduate college with a Bachelor's degree 13 percent of the time, compared to 73 percent among those whose parents have advanced graduate degrees.

7. The likelihood that a child will exceed a parent's educational attainment is now lower in the United States than in any other advanced nation.



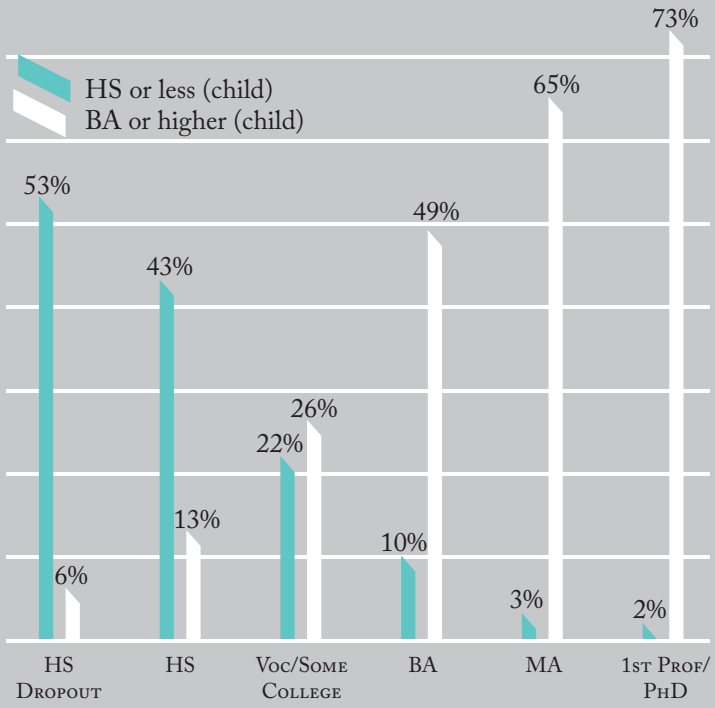
Intergenerational educational mobility in the U.S. is lower than in other economies.

SOURCE: Georgetown University Center on Education and the Workforce analysis of 2006 OECD PISA Database



Workers with advanced degrees earn up to $2.1 million more than college dropouts over a lifetime.

SOURCE: Carnevale et al., *The College Payoff*, 2011.



Child educational attainment is highly correlated with that of the parent. Seventy-three percent of students whose parent earned a PhD or professional degree obtain a Bachelor's degree or better.

SOURCE: Georgetown University Center on Education and the Workforce calculations using table 341 Digest of Education Statistics 2011 (accessed 6/18/13) nces.ed.gov/programs/digest/d11/tables/dt11_341.asp

8. Standardized college admissions tests, identified in this study as SAT/ACT scores, include results for both the SAT, administered by the Educational Testing Service and until recently scored using a scale from 400 to 1600, and the ACT, administered by ACT Inc., which uses a composite 36 point scale (the average of four separate tests of 36 points each). For this study, ACT scores were changed to equivalent SAT scores using the 1600-point scale, following concordance developed by ETS.

9. This study is based in part on a three-year pooled Integrated Postsecondary Education Data System (IPEDS) sample; hence the number of schools is approximate. Data are pooled to smooth small annual fluctuations in freshman enrollment.

10. This estimate was derived by multiplying the race/ethnic composition of enrollment flows by the known graduation rates by race and levels of selectivity.

11. The most selective tiers of the postsecondary hierarchy are growing in the number of seats and in the number of institutions, according to the conventional metrics in the Barron's Admissions Competitiveness Index. This trend suggests an increase in quality as measured by student test scores and the traditional selectivity metrics. The open-access, four-year colleges are declining in overall enrollments as well as in the number of institutions, in part because institutions are moving upstream into higher selectivity and higher per student spending categories over time. These structural shifts have increased crowding and reduced revenue per student in the less selective institutions. The result is an increase in people with some college but no degree or certificate, as well as sub-baccalaureate certificates and Associate's degrees. But the shift has also caused a decline in attainment rates as well as increased time to earned degree. Bound, et al. show that crowding and declining spending per student reduce graduation rates and increased time to degree completion (see *Understanding the Decrease in College Completion Rates and the Increased Time to the Baccalaureate Degree*, 2007). In a subsequent study, Bound, et al. conclude: "(T)he rise in the fraction of high school graduates attending college has not been a proportional increase in the fraction who finish … and this decline is most pronounced amongst men beginning college at less-selective public four-year schools and amongst students starting at community colleges. We decompose the observed changes in completion rates into the component due to changes in preparedness of entering students and the component due to collegiate characteristic, including type of institutions and resources per student. We find that, while both factors play a role, it is the collegiate characteristics that are more important." (See "Why Have College Completion Rates Declined?" 2009. Also, see Oreopoulos and Petronijevic in "Making College Worth It" 2013, and Council of Economic Advisers, *Preparing the Workers of Today for the Jobs of Tomorrow*. 2009.

12. African Americans and Hispanics see an earnings boost from $52,000 to $63,000 moving from an open-access to a selective four-year college, obtaining a 21 percent earnings premium compared to a 15 percent premium obtained by whites.

13. Graduate school completions are roughly similar for all students (35%) and African Americans and Hispanics (33%) in the top 468 colleges. Much the same is true for all students (21%) and minorities (23%) at open-access colleges.

14. Espenshade and Radford demonstrate that minorities who attend the top colleges have lower SAT/ACT scores than whites (see *No Longer Separate Not Yet Equal: Race and Class in Elite College Admission and Campus Life*, 2009). However, this study demonstrates throughout that these minorities have much higher graduations rates at these top schools compared to similarly qualified minorities at open-access colleges.

15. Logan, *Separate and Unequal: The Neighborhood Gap for Blacks, Hispanics and Asians in Metropolitan America*, 2010, 2011.

16. Among low-income college students, clear racial bias in outcomes exists. Whites drop out much less often and obtain Bachelor's degrees or better at nearly twice the rate of African Americans and Hispanics.

	College dropout (%)	Certificate (%)	Associate's degree (%)	Bachelor's degree or better (%)
White	45	17	15	23
African American	55	24	10	12
Hispanic	59	16	12	13

17. Carnevale and Strohl, "How Increasing College Access is Increasing Inequality, and What To Do About It," 2010.

18. These unconscious stereotyping processes have become better understood due to advances in the cognitive sciences over the past few decades. In general, they provide an empirical basis for understanding "social cognition." Social cognition is the biological process associated with the human use of social categories as prompts for processing large amounts of information (see Harris and Fiske, "Dehumanizing the Lowest of the Low: Neuroimaging Responses to Extreme Out-Groups," 2006). Faced with infinite information and finite memory, humans are hardwired to categorize information into accessible bundles. Socially constructed categories like race and ethnicity become the frameworks for organizing human observations. The use of fast and facile social categories to interpret human experience can be both conscious and automatic depending on the information and immediacy for making decisions. Typing and driving are virtually automatic and subliminal cognitive processes, but so are many human social judgments, especially when they are made casually or quickly under stress. Much of this understanding of social cognition derives from the pioneering work in behavioral economics on the "availability heuristic" by Nobel Laureate Daniel Kahneman (see Tversky and Kahneman, "Availability: A Heuristic for Judging Frequency and Probability," 1973; and Kahneman, "Maps of Bounded Rationality," 2003). Kahneman spawned a whole generation of work in the cognitive sciences that demonstrates an adaptive human tendency to use fast and facile heuristics for processing information that can lead to systematic errors and destructive social stereotypes. Also, see Hammond, *Human Judgment and Social Policy*, 1996.

19. In previous work, CEW found that it was difficult to reproduce the current levels of racial diversity in selective colleges unless admissions criteria were either explicitly or implicitly race based (see Carnevale and Rose, "Socioeconomic Status, Race-Ethnicity, and Selective College Admission," 2004; and Carnevale and Strohl, "How Increasing College Access Is Increasing Inequality, And What To Do About It," 2010). Proxies for race can generate racial diversity so long as the courts and those who oppose race-based affirmative action would regard implicit racial proxies as legitimate.

20. Thomas J. Kane, "Misconceptions in the Debate over Affirmative Action in College Admissions," 1999.

21. McKernan and Ratcliffe, "Less Than Equal: Racial Disparities in Wealth Accumulation," 2013.

Appendix A. Data and Barron's Selectivity

Section 1. Data

Data on first-time freshman enrollments were obtained from the U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS).[1] These analyses exclude data on Washington state, which were not used because of a reported large decline from fall 1997 to fall 1998 (96,017 to 32,910).[2] This anomaly was discussed with both IPEDS staff and Washington state staff and could not be explained. The Center on Education and the Workforce (CEW) analysis of state trends demonstrated that this enrollment change had a significant effect on overall enrollment, particularly for selectivity. Nonresident aliens and other/multi-race data were omitted because of comparability problems over time.

Data on Barron's selectivity were included, using the National Center on Education Statistics (NCES) restricted use Barron's Admissions Competitive Index Data and were linked to other data by institutional ID (UNITID).

Data on instructional costs were obtained from the publicly available Delta Cost Project.[3]

Data on graduation rates and the distribution of degrees by test scores and selectivity were calculated using the NCES restricted use National Education Longitudinal Study (NELS) 1988/2000 file.

Data on SAT/ACT scores are equivalent scores generated using a crosswalk created by Educational Testing Service (ETS). Missing data on SAT/ACT scores were imputed using an equipercentile correspondence between a three-part test administered as part of the NELS survey.

Data on graduate degree attainment by race and selectivity were calculated using data from the NCES restricted use Baccalaureate and Beyond Longitudinal Study (1993/2003).

Youth population data were calculated using publicly available data from the American Community Survey, the U.S. Census Bureau, and the Current Population Survey.

---

1 IPEDS (accessed 10/15/12) http://nces.ed.gov/ipeds/

2 See table 181 in the Digest of Education Statistics, 2004 (accessed 6/24/13) http://nces.ed.gov/programs/digest/d04/tables/dt04_181.asp?referrer=list

3 Delta Cost Project http://nces.ed.gov/ipeds/deltacostproject/.

Section 2. Selectivity

CEW relied on Barron's ranking of four-year institutions to create the top tier of 468 colleges. This aggregation is from their Most Competitive, Highly Competitive, and Very Competitive Colleges. The center obtained these data from the restricted use NCES-Barron's Admissions Competitiveness Index Data. The selection criterion for the six relevant tiers used in this analysis has been taken from text in Barron's Educational Series, 2009 (see section 3). The middle tier, discussed only in appendix B, is from Barron's Competitive Colleges. The open-access sector is basically a residual category that consists of the last two tiers of Barron's selectivity, Less and Non-Competitive Colleges, the four-year institutions (specialty schools and small colleges for the most part) not included in Barron's, and the two-year and less than four-year institutions.

CEW readily acknowledges that more in-depth analyses of various compositional and sectoral issues are called for but has chosen to aggregate to the gross level to make a strong point. Polarization inside higher education is clear even when aggregated at this high level. The center's earlier work demonstrates a clear hierarchy within these levels of selectivity, and it is highly correlated with educational and labor market outcomes (Carnevale and Strohl, 2010; Carnevale and Rose, 2004).

Most Competitive — The most competitive colleges have highly competitive admissions, generally requiring high school rank in the top 10-20 percent and grade point averages (GPAs) of a B+ and above. Median SAT scores are between 1310 and 1600 and 29+ on the ACT. Admission rates are usually less than one-third of applications.

Highly Competitive — The highly competitive colleges look for students with GPAs of B and above and a position in the top 20-35 percent of their high school class. Median SAT scores are between 1240 and 1310. Median ACT scores are 27 to 28. Admissions rates are between 33 percent and 50 percent.

Very Competitive — The very competitive colleges admit students with GPAs of B– and above who rank between 35 percent and 50 percent of their high school class. Median scores are between 1150 and 1240 on the SAT and between 24 and 26 on the ACT. These colleges generally accept one-half to three-fourths of their applicants, but a significant number accept less than one-third.

Competitive — Competitive is a broad category that generally admits students with median SAT scores between 1000 and 1140 and with ACT scores between 21 and 23. Some require high school GPAs of a B– or better, while others accept a minimum C GPA. Most of the competitive colleges admit 50-65 percent of applicants, while some admit between 75 percent and 85 percent. A small number of these colleges accept less than one-half of applicants.

Less Competitive — Median scores in this tier are generally below 1000 on the SAT or below 21 on the ACT, though some that require admissions tests do not report entry medians. Many of these colleges accept students with below C averages in high school and in the top 65 percent of their class. Acceptance rates are above 85 percent.

Noncompetitive — Noncompetitive colleges require only evidence of high school graduation. Entrance exams are sometimes used for placement purposes. Seating capacity can limit the acceptance rates in these colleges, but those with acceptance rates of 98 percent and higher are automatically included.

Section 3. Changes in the number of institutions by tiers of selectivity and in the open-access sector.

	1995	2009	Change
Total two- and four-year	3,688	4,409	721
Total four-year	2,215	2,719	504
Most competitive	43	82	39
Highly competitive	72	109	37
Very competitive	211	277	66
The report's most selective tier	326	468	142
Competitive (middle tier)	594	671	77
Less competitive	368	198	-170
Noncompetitive	163	93	-70
Four-year not included in Barron's (residual)	764	1,289	525
Two-year	1,473	1,670	197
Total open-access	2,768	3,250	482

Source: Georgetown University Center on Education and the Workforce calculations using NCES-Barron's Admissions Competitiveness Index Data (various years), IPEDS (various years), and Table 279, Digest of Education Statistics, 2010.

Appendix B. Enrollments, Enrollment Flows, and Disproportionality in Enrollments

The postsecondary education system provides access to opportunity for millions of people each year and deserves to be scrutinized by some metric that enables judging how well opportunity is equitably provided. To accomplish this, this study uses the metric of "disproportionality," which has its roots in being used to determine whether special needs students are being adequately served in the K-12 system. By this measure, a school district is doing well when the proportion served is close to the proportion in the population. While use of this metric to assess postsecondary coverage is not perfect, partly because college is not mandated, comparing the race and ethnic distribution in enrollment to that of the college-age youth population aged 18 to 24 serves as a good proxy. We hold that it is a good first approximation of just how well the nation's postsecondary system is serving the nation's youth by race and ethnicity.

To accomplish this analysis, Integrated Postsecondary Education Data System (IPEDS) freshman (full- and part-time) enrollment data were pooled for 1993-1995 and compared to a pooled data set for 2007-2009. These pooled years are referenced as 1995 and 2009 throughout the appendices, the report, and the executive summary. These data are compared to three-year pooled youth samples from the American Community Survey for the later years (2007-2009) and a U.S. Census Bureau 1990 sample for the earlier years (1993-1995). In all cases, samples were pooled to dampen any year-to-year variation, especially in enrollments. As noted in appendix A, it was necessary to omit Washington state data from the study.

The remainder of this appendix will present the enrollment data used in the analysis and present the steps used to calculate disproportionality. Data in this appendix are the basis for the separate sections detailing overall enrollment change, flows, as well as detailed information for Asians, Native Americans, African Americans, Hispanics, and whites, and the middle-tier of selectivity.

Section 1. Disproportionality

The 1995 distribution of race and ethnic groups by total enrollment and by tiers of selectivity are presented in table 2, having been calculated from the enrollment data in table 1. Table 3 shows the level of disproportionality in enrollments that existed in 1995 and was calculated by subtracting the population distribution from the individual columns of enrollment distribution.

Table 3 demonstrates that in 1995 white enrollments were 5 percentage points above their corresponding youth population share (overrepresented). At the same time, African Americans and Hispanics were underrepresented by 2 percentage points and 5 percentage points, respectively. Asians were overrepresented by 2 percentage points. Native Americans had balanced representation.

By tiers of selectivity, this reports finds that in 1995 whites were 9 percentage points overrepresented in the top three tiers of selectivity, 12 percentage points overrepresented in the middle tier, and just 1 percentage point higher in the open-access colleges. The fact that 64 percent of all freshman enrollments were in the open-access sector in 1995 explains the overall level of 5 percentage points overrepresentation (see table 11). African Americans and Hispanics were both significantly underrepresented in the top tier schools (-8 percentage and -9 percentage points, respectively) and in the middle tier schools (-5 percentage and -8 percentage points,

respectively.) Hispanics had their least level of disproportionality in the open-access colleges where their enrollment share was 3 percentage points under population share. Asians were just slightly overrepresented and African Americans and Native Americans both had balanced representation in the open-access colleges.

Table 4 details freshman enrollments in 2009, and table 5 details the distribution of race/ethnicity overall and within levels of selectivity. Table 5 demonstrates just how much the college campuses have changed with the large growth in minority access. The white share of total enrollment dropped 10 percentage points while African American and Hispanic enrollment shares grew more than 4 percentage points each. The Asian share increased by 1 percentage point; the Native American share was steady.

In terms of disproportionality, in 2009 this study shows that whites were still overrepresented (table 6) but that this historic overrepresentation had declined by 3 percentage points since 1995 (table 7). African-American representation improved by 3 percentage points while there was no change in the representation among Hispanics (under), Asians (over), and Native Americans (balanced).

Across the selectivity tiers significant composition effects exist. In 1995, whites were 9 percentage points overrepresented in the most selective colleges while African Americans (-8 percentage points) and Hispanics (-7 percentage points) were significantly underrepresented. Comparatively, enrollment representation was good in the open-access colleges where whites were a percentage point high; African Americans were balanced; and Hispanics were underrepresented by 3 percentage points (see table 3).

By 2009, the effects of polarization and differentials in enrollment flows are apparent. White overrepresentation grew by 4 percentage points to where enrollment share was 13 percentage points above youth population share (see tables 6 and 7). Representation among African Americans held steady at -8 percentage points while that of Hispanics worsened by 4 percentage points with enrollment share declining to -11 percentage points below youth population share.

At the other end of the spectrum, white overrepresentation vanished, dropping 6 percentage points to where white enrollment share was 4 percentage points under their youth population share. African-American representation increased relatively in the open-access sector where their enrollment share increased by 5 percentage points above youth population share and that of Hispanics increased by 1 percentage point.

Section 2. The missing middle.

The middle tier of selectivity, in *Barron's Competitive Colleges*, is an important tier of the American postsecondary education system but does not play a significant role in this study focused on polarization. In 1995, the middle tier comprised 21 percent of freshman enrollments and declined to 20 percent by 2009 (see table 11). The tier grew by 77 colleges while enrollment gains were 28 percent, slightly less than total enrollment growth (see table 14). Both the top 468 and the open-access sectors each captured twice the share of net new enrollments. In some ways, the middle has acted as the pivot in the dynamics of polarization. Of course, the story is more complicated and nuanced than this: table 12, for instance, demonstrates a slow push up; 23 percent of new African-American enrollments and 15 percent of new Hispanic enrollments were there. The dynamics across all the sectors will be investigated more fully in upcoming research.

Section 3. Asians and Native Americans.

African Americans and Hispanics are not the only minorities in the United States, but data limitation hindered our ability to conduct an identical and full analysis of Asians and Native Americans. In particular, it was not possible to analyze differences in educational outcomes, controlling for test scores, for either group. The IPEDS-based analysis suggests a complex story about Asian enrollment flows. Table 10 shows that 50 percent of net new Asian enrollments have gone to the most selective schools but that 30 percent have also gone to the open-access sector. Preliminary and unpublished analyses suggest there might be an underlying income effect at play for Asians. Table 7 demonstrates that there has been no change in disproportionality for Asians on any selectivity tier. Asians enrollments remain 2 percentage points above youth population share, 6 percentage points above at the top schools, and 1 percentage point each in the middle-tier and open-access sectors.

Native Americans are a small part of the youth population. The IPEDS data analysis demonstrates Native Americans have balanced postsecondary enrollments and disproportionality has not changed for this ethnic group.

Table 1. Enrollment and population, 1995

	Population aged 18-24	Enrollment	Top three tiers of selectivity	Middle tier	Open-access, two- and four-year schools
All	24,902,376	2,104,623	325,068	434,160	1,345,395
White	16,933,475	1,532,345	249,736	349,144	933,466
African American	3,555,652	255,535	20,737	40,352	194,446
Hispanic	3,264,864	180,294	20,611	22,681	137,002
Asian	935,950	114,430	32,021	18,635	63,774
Native American	212,435	22,020	1,964	3,349	16,708

Table 2. Distribution of population and freshman enrollment by selectivity and race/ethnicity; 1995

	Population aged 18-24 (%)	Enrollment (%)	Top three tiers of selectivity (%)	Middle tier (%)	Open-access, two- and four-year schools (%)
All	100	100	100	100	100
White	68	73	77	80	69
African American	14	12	6	9	14
Hispanic	13	9	6	5	10
Asian	4	5	10	4	5
Native American	1	1	1	1	1

*In the following Tables, numbers may not add to 100 percent due to rounding.

Table 3. Enrollment disproportionality, 1995

	Total (%)	Top three tiers of selectivity (%)	Middle tier (%)	Open-access, two- and four-year schools (%)
White	5	9	12	1
African American	-2	-8	-5	0
Hispanic	-5	-7	-8	-3
Asian	2	6	1	1
Native American	0	0	0	0
Percentages calculated from enrollment shares minus population shares in table 2.				

Table 4. Enrollment and population, 2009

	Population aged 18-24	Enrollment	Top three tiers of selectivity	Middle tier	Open-access, two- and four-year schools
All	28,833,174	2,769,839	578,645	557,229	1,633,965
White	17,742,846	1,755,501	432,118	389,056	934,327
African American	4,275,759	441,442	38,199	83,229	320,015
Hispanic	5,325,143	372,836	45,167	51,686	275,982
Asian	1,255,725	169,110	59,217	28,325	81,568
Native American	233,701	30,950	3,944	4,933	22,073

Table 5. Distribution of population and freshman enrollment by selectivity, and race/ethnicity, 2009

	Population aged 18-24 (%)	Enrollment (%)	Top three tiers of selectivity (%)	Middle tier (%)	Open-access, two- and four-year schools (%)
All	100	100	100	100	100
White	62	63	75	70	57
African American	15	16	7	15	20
Hispanic	18	13	8	9	17
Asian	4	6	10	5	5
Native American	1	1	1	1	1

Table 6. Distribution of postsecondary enrollment by race across institutional selectivity tiers, 1995-2009

	Top three tiers of selectivity (%)		Middle tier (%)		Open-access, two- and four-year school (%)		All Title IV postecondary institutions (%)	
	1995	2009	1995	2009	1995	2009	1995	2009
All	15	21	21	20	64	59	100	100
White	16	25	23	22	61	53	100	100
African American	8	9	16	19	76	72	100	100
Hispanic	11	12	13	14	76	74	100	100
Asian	28	35	16	17	56	48	100	100
Native American	9	13	15	16	76	71	100	100

Table 7. Enrollment disproportionality, 2009

	Total (%)	Top three tiers of selectivity (%)	Middle tier (%)	Open-access, two- and four-year schools (%)
White	2	13	8	-4
African American	1	-8	0	5
Hispanic	-5	-11	-9	-2
Asian	2	6	1	1
Native American	0	0	0	1
Percentages calculated from enrollment shares minus population shares in table 2.				

Table 8. Percentage point changes in disproportionality by selectivity, race, and ethnicity, 1995-2009

	Total (%)	Top three tiers of selectivity (%)	Middle tier (%)	Open-access, two- and four-year schools (%)
White	-3	4	-4	-6
African American	3	0	5	5
Hispanic	0	-4	-1	1
Asian	0	0	0	0
Native American	0	0	0	0
Change calculated by subtracting table 7 from table 3.				

Table 9. Net new gains in enrollments by selectivity, race and ethnicity, 1995-2009

	Total	Top three tiers of selectivity	Middle tier	Open-access, two- and four-year schools
All	665,215	253,577	123,069	288,570
White	223,156	182,382	39,912	861
African American	185,907	17,462	42,877	125,569
Hispanic	192,542	24,556	29,005	138,981
Asian	54,681	27,196	9,691	17,794
Native American	8,930	1,981	1,584	5,365

Table 10. Distribution of net new enrollment gains within total and selectivity tiers by race and ethnicity

	Total (%)	Top three tiers of selectivity (%)	Middle tier (%)	Open-access, two- and four-year schools (%)
All	100	100	100	100
White	34	72	32	0
African American	28	7	35	44
Hispanic	29	10	24	48
Asian	8	11	8	6
Native American	1	1	1	2

Table 11. Distribution of net new enrollment gains across selectivity tiers by race and ethnicity

	Total (%)	Top tier(%)	Middle tier (%)	Open-access, two- and four-year schools (%)
All	100	38	19	43
White	100	82	18	0
African American	100	9	23	68
Hispanic	100	13	15	72
Asian	100	50	18	33
Native American	100	22	18	60

Table 12. Enrollment shares and change in shares across tiers of selectivity, 1995-2009

	Top three tiers of selectivity (%)	Middle tier (%)	Bottom tier (%)
1995	15	21	64
2009	21	20	59
Share shift 1995-2009	5	-1	-5

Table 13. Shares of net gains across tiers of selectivity

	Top three tiers of selectivity (%)	Middle tier (%)	Bottom tier (%)
All	38	19	43
White	82	18	0
African American	9	23	68
Hispanic	13	15	72
Asian	50	18	33
Native American	22	18	60

Table 14. Shares of enrollment gains in selective tiers by race/ethnicity

	Total (%)	Top three tiers of selectivity (%)	Middle tier (%)	Bottom tier (%)
White	34	72	32	0
African American	28	7	35	44
Hispanic	29	10	24	48
Asian	8	11	8	6
Native American	1	1	1	2

Table 15. Enrollment growth by selectivity tier

Total	32%
Top three tiers of selectivity	78%
Middle tier	28%
Open-access	21%

Appendix C. Low-Hanging Fruit — High Achieving Minority Students Who Either Don't Complete or Don't Attend College

Contrary to popular belief, not every college-ready student attends and completes college. The Center on Education and the Workforce (CEW) has investigated the loss of high-performing minority and low-income students for some time and makes use of an administered nationally normed exam, given as part of the National Educational Longitudinal Study (NELS) survey, to impute missing administrative test data to create an SAT/ACT equivalent score. These data are made available in restricted use from the National Center for Educational Statistics (NCES). These data enable accounting for students who don't take a college entrance exam, including many students who attend community colleges or who don't attend college at all.

Analyses using these data demonstrate that up to 580,000 students each year, who were in the top half of their high school classes, either do not attend college or do not graduate. As noted in this report, these data suggest that, in significant part, the "graduation crisis" is a function of which postsecondary schools these students attend and not that the students are somehow "unfit" for college. When analyzed by race and ethnicity, 111,000 African-American and Hispanic students each year either do not go to college, as would be expected, or do not graduate. This is a loss rate of 55 percent, which compares unfavorably to a loss rate of 37 percent among similarly defined white students. As this report demonstrates, had these students attended the most selective colleges, the African-American and Hispanic students would be predicted to graduate at a rate of 73 percent. The white students also could be expected to graduate at a higher rate than observed.

Analyses of the data on these high-scoring students by income shows 240,000 (43%) students come from the bottom half of the income socioeconomic status (SES) distribution; 340,000 come from the top. Among African-American and Hispanic high-scoring students, 56 percent come from the bottom half of the income distribution.

Most recently, CEW's long-standing estimates of so-called low-hanging fruit (college-ready students who don't go to college or undershoot their potential) were validated. Hoxby and Turner (2013) demonstrated that many (35,000) very high-scoring, low-income students did not attend the most selective institutions as their test scores would suggest, instead going to schools well below their potential. One conclusion that these authors drew was that admissions offices troll the same good high schools and effectively compete for a limited pool of college going students. Hoxby and Turner's work used administrative admissions test data, so it was limited to persons who took these exams. CEW's work is able to define more broadly high-scoring students outside of the "normal" admissions testing.

Bibliography

Astin, Alexander W., and Leticia Oseguera. "The Declining 'Equity' of American Higher Education." *The Review of Higher Education* 27, no. 3 (2004): 321-41.

Barron's Education Series, College Division. *2009 Barron's Profiles of American Colleges*. Hauppauge, NY: Barron's Educational Series, 2008.

Bastedo, Michael N., and Ozan Jaquette. "Institutional Stratification and the Fit Hypothesis: Longitudinal Shifts in Student Access." Paper presented at the annual meeting of the Association for the Study of Higher Education, Vancouver, BC, Nov. 4-7, 2009.

Bound, John, Michael Lovenheim, and Sarah Turner. "Why Have College Completion Rates Declined? An Analysis of Changing Student Preparation and Collegiate Resources." NBER Working Paper 15566, 2009.

———. *Understanding the Decrease in College Completion Rates and the Increased Time to the Baccalaureate Degree*. Report 07-626. Ann Arbor, MI: Population Studies Center, University of Michigan, 2007.

Brint, Steven, and Jerome Karabel. "The Diverted Dream" in *Community Colleges and the Promise of Educational Opportunity in America, 1900-1985*. New York, NY: Oxford University Press, 1989.

Carnevale, Anthony P., and Jeff Strohl. "How Increasing College Access Is Increasing Inequality, and What To Do About It" in *Rewarding Strivers: Helping Low-Income Students Succeed in College*. Edited by Richard D. Kahlenberg. New York, NY: Century Foundation Press, 2010.

Carnevale, Anthony P., and Stephen J. Rose. "Socioeconomic Status, Race-Ethnicity, and Selective College Admission" in *America's Untapped Resource: Low Income Students in Higher Education*. Edited by Richard D. Kahlenberg. New York, NY: Century Foundation, 2004.

Carnevale, Anthony P., Stephen J. Rose, and Ban Cheah. *The College Payoff: Education, Occupations, Lifetime Earnings*. Washington, DC: Georgetown University Center on Education and the Workforce, 2011.

Carnevale, Anthony P., Stephen J. Rose, and Andrew R. Hanson. *Certificates: Gateway to Gainful Employment and College Degrees*. Washington, DC: Georgetown University Center on Education and the Workforce, 2012.

Carnevale, Anthony P., Jeff Strohl, and Michelle Melton. *What's It Worth? The Economic Value of College Majors*. Washington, DC: Georgetown University Center on Education and the Workforce, 2011.

Clark, Burton R. " 'Cooling-Out' Function In Higher Education." *The American Journal of Sociology* 65, no. 6. (1960): 569-576.

———. " 'Cooling-Out' Function Revisited." *New Directions for Community Colleges* 1980, no. 32 (1980): 15-31.

Council of Economic Advisors, Executive Office of the President. *Preparing the Workers of Today for the Jobs of Tomorrow*. Washington, DC: The White House, 2009.

Dale, Stacy Berg, and Alan B. Krueger. "Estimating the Payoff of Attending a More Selective College: An Application of Selection on Observables and Unobservables." *Quarterly Journal of Economics* 107, no. 4 (2002): 1491-1527.

Desrochers, Donna M., and Jane V. Wellman. *Trends in College Spending, 1999-2009*. Washington, DC: U.S. Department of Education. Delta Cost Project, 2011.

Espenshade, Thomas J., and Alexandria W. Radford. *No Longer Separate Not Yet Equal: Race and Class in Elite College Admission and Campus Life*. Princeton, NJ: Princeton University Press, 2009.

Fischer, Karin."Elite Colleges Lag in Serving the Needy." *Chronicle of Higher Education* 52, no. 36 (2006).

———. "Mass. Merit Aid Fails to Increase Access." *Chronicle of Higher Education* 52, no. 29 (2006).

Gamoran, Adam. "American Schooling and Educational Inequality." *Sociology of Education* 74, extra issue (2001): 135-53.
Goldrick-Rab, Sara, and Peter Kinsley. "School Integration and the Open Door Philosophy: Rethinking the Economic and Racial Composition of Community Colleges" in *Bridging The Higher Education Divide: Strengthening Community Colleges and Restoring the American Dream*. New York, NY: The Century Foundation, Inc., 2013.
Hammond, Kenneth R. *Human Judgment and Social Policy: Irreducible Uncertainty, Inevitable Error, Unavoidable Injustice*. New York, NY: Oxford University Press, Inc., 1996.
Harris, Lasana T., and Susan T. Fiske. "Dehumanizing the Lowest of the Low: Neuroimaging Responses to Extreme Out-Groups." *Psychological Science* 17, no. 10 (2006): 847-53.
Hout, Michael. "Educational Progress for African Americans and Latinos in the United States from the 1950s to the 1990s: The Interaction of Ancestry and Class." Paper presented at U.S./U.K. Ethnic Minority and Social Mobility Conference, Bath, England, 1999.
Hoxby, Caroline M. "The Changing Selectivity of American Colleges." *Journal of Economic Perspectives* 23, no. 4 (2009).
Hoxby, Caroline M., and Christopher Avery. "The Missing 'One-Offs': The Hidden Supply of High-Achieving, Low Income Students." NBER Working Paper 18586, 2012.
Kahlenberg, Richard. *The Remedy: Class, Race, and Affirmative Action*. New York: Basic Books, 1997.
Kahneman, David. "Maps of Bounded Rationality: Psychology for Behavioral Economics." *The American Economic Review* 93, no. 5 (2003): 1449-75.
Kane, Thomas J. "Misconceptions in the Debate over Affirmative Action in College Admissions" in *Chilling Admissions*. Edited by Gary Orfield and Edward Miller. Cambridge, MA: Harvard Education Publishing Group, 1999.
Karen, David. "Changes in Access to Higher Education in the United States, 1980–1992." *Sociology of Education* 75, no. 3 (2002): 191-210.
Krueger, Alan B., Jesse Rothstein, and Sarah Turner. "Race, Income, and College in 25 Years: Evaluating Justice O'Connor's Conjecture." *American Law and Economic Review* 8, no. 2 (2006): 282-311.
Leonhardt, David. "As Wealthy Fill Top Colleges, Concerns Grow Over Fairness." *The New York Times*, April 22, 2004.
Logan, John R. *Separate and Unequal: The Neighborhood Gap for Blacks, Hispanics and Asians in Metropolitan America*. Providence, RI: US2010 Project, 2011.
McKernan, Signe-Mary, Caroline Ratcliffe, Eugene Steverte, and Sisi Zhang. *Less than Equal: Racial Disparities in Wealth Accumulation*. Washington, DC: Urban Institute, 2013.
Oakes, Jeannie. "Commentary Access and Differentiation: Structuring Equality and Inequality in Education Policy" in *Handbook of Education Policy Research*. Edited by Gary Stykes, Barbara Schneider, and David N. Plank. New York, NY: Routledge, 2009.
Oreopoulos, Philip, and Uros Petronijevic. "Making College Worth It: A Review of Research on the Returns to Higher Education." NBER Working Paper 19053, 2013.
Organization of Economic Cooperation and Development (OECD). "A Family Affair: Intergenerational Social Mobility across OECD Countries" in *Economic Policy Reforms: Going for Growth*. Paris: OECD Publishing, 2010.

Reardon, Sean F. "The Widening Academic Achievement Gap between the Rich and the Poor: New Evidence and Possible Explanations" in *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*. Edited by Greg J. Duncan and Richard J. Murnane. New York, NY: Russell Sage Foundation and Spencer Foundation, 2011.

Rileybahr, Peter. "Cooling Out in the Community College: What is the Effect of Academic Advising on Students' Chances of Success?" *Research in Higher Education* 49 no. 8 (2008): 704-32.

Roksa, Josipa, Eric Grodsky, Richard Arum, and Adam Gamoran. "Changes in Higher Education and Social Stratification in the United States" in *Stratification in Higher Education: A Comparative Study*. Edited by Yossi Shavit, Richard Arum, Adam Gamoran, and Gila Menahem. Stanford, CA: Stanford University Press, 2007.

Sacks, Peter. "How Colleges Perpetuate Inequality," *Chronicle Review, Chronicle of Higher Education* 53, no. 19 (2007).

———. *Tearing Down the Gates: Confronting the Class Divide in American Education*. Berkeley, CA: University of California Press, 2007.

Selingo, Jeffrey, and Jeffrey Brainard. "The Rich-Poor Gap Widens for Colleges and Students." *Chronicle of Higher Education* 52, April 6, 2006.

Smith, Lauren. "Four Decades of Survey Data on American Freshmen Reveal Widening Socioeconomic Gap," *Chronicle of Higher Education*, April 9, 2007.

Tversky, Amos, and Daniel Kahneman. "Availability: A Heuristic for Judging Frequency and Probability." *Cognitive Psychology* 5, no. 2 (1973): 207-232.

United States Census Bureau. "1990s: National Tables." Population Estimates Program. Washington, DC: U.S. Department of Commerce, 2000.

United States Department of Education, National Center for Education Statistics (NCES). *Digest of Education Statistics: 2011*. (NCES 2012-001), By Thomas D. Snyder and Sally A. Dillow. Washington DC: Institute of Education Sciences (IES), 2012.

———. *Baccalaureate and Beyond Longitudinal Study*. Washington, DC: Institute of Education Sciences (IES), 1993/2003.

———. Integrated Postsecondary Education System (IPEDS). Washington, DC: Institute of Education Sciences (IES), 2010.

———. NCES-Barron's Admissions Competitiveness Index Data Files: 1972, 1982, 1992, 2004, 2008. By Carl M. Schmidt. Washington, DC: Institute of Education Sciences (IES), 2009.

———. National Educational Longitudinal Study (NELS). Washington, DC: Institute of Education Sciences (IES), 1998/2000.

———. National Postsecondary Student Aid Studies (NPSAS) 2007-08. Washington, DC: Institute of Education Sciences (IES), 2008.

———. Web Tables - Profile of Undergraduate Students: 2007-08. By Sandra Staklis. Washington, DC: Institute of Education Sciences (IES), 2010.

Wyner, Joshua S., John M. Bridgeland, and John J. DiIulio Jr. *Achievement Trap: How America Is Failing Millions of High-Achieving Students from Lower-Income Families*. Lansdowne, VA: Jack Kent Cooke Foundation, 2007.

Separate and Unequal: How Higher Education Reinforces the Intergenerational Reproduction of White Racial Privilege
comprises a full report, and an executive summary.
Both can be accessed at
cew.georgetown.edu/separateandunequal

GEORGETOWN UNIVERSITY

Georgetown Public Policy Institute

Center on Education and the Workforce

3300 Whitehaven Street NW, Suite 5000
Washington, DC 20007
Mail: Campus Box 571444,
Washington, DC 20057
cew.georgetown.edu

Union Bug