

The Crossroads of U.S. Demographics and Higher Education: A Tale of Disparate Futures

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to heaven, we were all going direct the other way.... (Charles Dickens, *A Tale of Two Cities*).

One measure of academic success at the highest level is the attainment of a faculty position at a college or university. At present, the academic landscape does not reflect the makeup of the U.S. population. A cursory examination of the faculty at most academic institutions would show that some groups, whites and Asian/Pacific Islanders, predominate, experiencing the “best of times”; however, other racial or ethnic groups, blacks, Native American/Alaskan Natives, and Hispanics are much less likely to occupy faculty positions, “the worst of times.” In other words, some racial and ethnic groups have been disproportionately “at-risk” of failing to achieve the highest levels of academic success. Not surprisingly, these are the same groups that are underrepresented (at-risk students) at earlier steps in the academic pipeline, for example, at the level of the bachelor’s degree. With respect to historical and current disparities in the racial and ethnic makeup of faculty, several questions come to mind. How much progress has been made over recent decades toward equitable achievement of academic success for all, including at-risk students? Will some racial and ethnic groups continue to experience the “worst of times” or do we have reason to be optimistic that existing disparities may diminish in the future? How is the rapidly changing demographic landscape of the U.S. likely to affect the production of researchers, scholars, and innovators?

We have examined the effect of an individual’s race or ethnicity in achieving specific academic milestones along the path to a career in academia, which frequently

translates to successful careers in other realms as well. Exploring the probability of academic success or failure associated with one’s race or ethnicity is a bit akin to using a sledgehammer to break a raw gemstone along the lines of its natural crystalline structure in order to produce a stone worthy of setting. Much of the complexity and true beauty may be damaged or remain obscured in the process, but more is likely to be revealed than could previously be seen.

Of course, some barriers to success are independent of one’s race or ethnicity. When a child is born into poverty or an abusive, dangerous home or with a significant learning disability, the odds of a successful academic experience can be poor regardless of an individual’s race or ethnicity. Also, some impediments to academic achievement may only be correlated with race or ethnicity, for example, poverty, immigrant status, or the education level of one’s parents. Nonetheless, it would be naive to deny that an individual’s race or ethnicity affects how he or she experiences the world and how the world at large responds in turn. Prejudice, racism, and bigotry, even when unconsciously held, still exist, and given the tribalism inherent in societies throughout human history, they unfortunately are here to stay.

We examined three academic benchmarks—attaining a bachelor’s degree, a doctorate, and a faculty position at a college or university. Although a bachelor’s degree is the basic first step toward an academic career, in most academic disciplines a doctorate is required to be a true “player” in the field. This is certainly the case in the sciences. Those who genuinely engage in the scientific endeavor, advance our knowledge, determine the direction of research, sit on grant-review panels, and act as the public face of science almost always possess a doctorate. The same is true in other fields. A person may be a wonderful novelist or musician, but success as a scholar of Spanish literature or music theory generally also requires a doctorate. Earning a doctoral degree is a necessary stepping-stone (but not, of course, sufficient) for a successful career in academia. Significant exceptions exist, but

doctoral recipients largely fuel the engine of inventive research and development that drives the U.S. economy.

Our objective is to sharpen the focus on an important inequity in higher education—disparities in advanced academic achievement as a function of an individual's race or ethnicity. Few will be surprised that such inequalities exist. However, perhaps counter-intuitively, the true depth of the problem and the degree of failure to satisfactorily address the disparities are difficult to grasp because too much supporting data exist. Anyone who has embarked upon a study of demographic and educational trends in the U.S. will have observed that there is no shortage of information. However, the data are so abundant and diverse and are collected and analyzed with such a multitude of methodologies that it is challenging to assemble a coherent picture.

The issues of race and ethnicity and their influence on educational attainment are too complex for easy and quick explanations, and we do not propose to solve the underlying problem in this article. On the other hand, understanding the progress made to date and considering future projections are required before a successful strategy for more progress can be constructed. In this paper, we assume that the ability of an individual to be successful in a discipline, a person's interest or disinterest in a field of study, and desire for academic attainment are independent of race or ethnicity. Disparities in educational attainment among racial or ethnic groups observed today or projected in the future exist not as a consequence of inherent differences in the abilities of races or ethnicities, but occur as a result of historical and present-day conditions that may often, broadly speaking, differ along racial or ethnic lines.

Overall Population Trends

The face of the U.S. will change dramatically within a single generation (see Figure 1, in Supplemental Materials in the Spring 2011 edition of CURQ on the Web). White non-Hispanics made up 74.4 percent of the population in 1993 (U.S. Census Bureau 2001), but had decreased to 67.1 percent by 2007-2008 (U.S. Census Bureau 2009a; 2010). A further decline to 57.4 percent is projected by 2030. Looking out one more generation to 2050, the white population, currently about 200.6 million is pre-

dicted to decline to 199.9 million (U.S. Census Bureau 2009b). Although the black population is projected to increase from its current 39.7 million persons to 47.3 million in 2030 and 52.8 million in 2050, blacks' percentage of the U.S. population will increase only slightly (from 12.3 percent to 13.2 percent; Figure 1). Most of the growth in the black population will occur in the 30+ age group, with a projected 19.7 percent decline in the cohort of 20-to-24-year-olds by 2030 and a 25.3 percent total decline by 2050 compared to 2010 percentages (U.S. Census Bureau 2009).

Asian/Pacific Islanders are projected to increase from their current 4.5 percent share of the U.S. population to 5.4 percent (19.4 million) by 2030 and 24.1 million in 2050—127-percent increase over 2000. The Native American/Alaskan Native population will increase at the same rate as the overall population, remaining at about 0.7 to 0.8 percent through 2050. The most dramatic, unfolding story of demographic change in the United States is in the heterogeneous ethnic group categorized as Hispanic, which made up only 9.8 percent of the population in 1993. Today's Hispanic population of 48.5 million (15.1 percent of the U.S. population) is expected to reach 70 million (21.8 percent) in a single generation (2030) and to more than double, to 110.7 million (27.8 percent), by 2050 (U.S. Census Bureau 2009).

Our goal is to identify and emphasize national patterns for these racial and ethnic groups, although on a state-by-state basis the trends may be strikingly different. About one-half of the states in the U.S. are projected to have more high school graduates in the next decade, with an equal number of states experiencing an overall reduction in the number of high school graduates (National Center for Public Policy and Higher Education 2008). Compared to their populations in 2000, 21 states will have a lower population in 2030. Some states with rapidly growing Hispanic populations, for example Arizona and Nevada, will experience a population increase in excess of 90 percent between 2000 and 2030 (National Center for Higher Education Management Systems 2009).

Among many other variables tracked by the U.S. Census, income and gender affect educational outcomes. Approximately two-thirds of students from families in the top income quartile, with at least one parent having

received a college degree, earned a bachelor's degree by age 26, compared with just 9 percent of those students in the bottom income quartile who had no parent with a college degree (Bowen, Chingos, and McPherson 2009). Furthermore, the percentages of children who are living in poverty are almost three times higher for blacks, American Indian/Alaskan Natives, and Hispanics, compared to whites and Asian/Pacific Islanders (National Center for Education Statistics 2010a). Two examples illustrate significant nuances that we cannot pursue here: black females earn college degrees at twice the rate of black males, and astonishingly, in 2008 black males aged 18 and over represented only 5 percent of total college students, but 36 percent of the total prison population (Council of the Great City Schools 2010).

Methods of Demographic Synthesis

Past, present, and projected demographic parameters of the U.S. population must be taken into account to make meaningful comparisons over time and among racial and ethnic groups because of the rapidly changing composition of the U.S. To that end we report in this article not percentages or numbers, but instead we have devised the Equality Index Value (EIV) that is normalized to the current or projected population of each racial and ethnic group. For example, the bachelor's Equality Index Value is the percentage of bachelor's degrees conferred by all degree-granting institutions (see Figure 2, in Supplemental Materials in the Spring 2011 edition of *CURQ on the Web*) divided by the actual (1993 and 2007; U.S. Census Bureau 2001; 2009a; 2010) or estimated (2030; U.S. Census Bureau 2009b) percentage that each racial and ethnic group represents in the overall U.S. population:

$$EIV_{\text{bachelor's}} = \frac{\% \text{ of bachelor's degrees for group}}{\% \text{ of group's representation in the overall population}}$$

Therefore, an EIV of 1 indicates the percentage of bachelor's degrees earned is equal to a group's percentage of the population. An EIV greater than 1 means the percentage of bachelor's degrees earned by a group exceeded the group's representation in the population. An EIV less than 1 means the percentage of bachelor's degrees earned by a group was less than the group's representation in the population.

For the future projections, the mean rate of yearly change in percentage of degrees conferred from 1993 to 2007 (14 years) for each group was calculated as: (% of degrees in 2007 - % of degrees in 1993) ÷ 14. An estimate of the percentage of degrees projected to be granted to each racial/ethnic group in 2030 (2007 to 2030 = 23 years) was calculated as: % of degrees in 2007 + (mean yearly change in percentage of degrees earned X 23). Finally, since a bachelor's degree is generally a requirement to enter a doctoral program, and this relationship is an important consideration in the context of our discussion, we here identify the doctorate to bachelor's degree (D-B) index. The D-B Index is defined as:

$$D-B \text{ Index} = EIV_{\text{doctorate}}/EIV_{\text{bachelor's}}$$

Academic Trends in Bachelor's Degrees

White students currently earn bachelor's degrees at a rate slightly greater than their representation in the population, a pace that we project will continue in the next generation (Figure 2). Asian/Pacific Islanders earn bachelor's degrees at a rate more than 50 percent higher than expected based on their proportion of the U.S. population. Due to a relatively slow rate of population growth compared to the rate of increase in the bachelor's degrees earned, Asian/Pacific Islanders are projected to earn bachelor's degrees at double their representation in the population by 2030.

The change over time in number of bachelor's degrees conferred on blacks and Native American/Alaskan Natives relative to their shares of the population is somewhat encouraging. At the rate of change experienced since the early 1990s, both races' shares of bachelor's degrees will be proportional to their share of the U.S. population by 2030. Demographic changes may be contributing to a projected increase in proportion of bachelor's degrees earned by blacks (U.S. Census Bureau 2009b). A slowing rate of increase in the pre-college and college-age cohorts relative to overall population growth among blacks will allow their population to "catch up" with respect to attainment of bachelor's degrees. Most of the improvement in bachelor's degrees earned by blacks is attributable to increases in women's educational achievement (Council of the Great City Schools 2010). Significant

investments in education and targeted programs for underrepresented groups, including for example, the McNair Scholars Program, the Lewis Stokes Alliance for Minority Participation, and the Tribal Colleges and Universities Program undoubtedly account for some of the good news.

The increase in number of bachelor's degrees conferred on blacks and Native American/Alaskan Natives may be a bit unexpected in the face of their apparently limited progress in public secondary education. Scores on standardized science tests by fourth-graders of all races and ethnicities exhibited statistically significant increases from 1996 to 2005 (National Science Foundation 2008), whereas scores for eighth-graders remained constant or increased only slightly. Among 12th graders, overall performance on standardized science tests showed a statistically significant decline from 1996 to 2005.

In all cases, blacks, Hispanics, and Native American/Alaskan Natives lag far behind whites and Asian/Pacific Islanders (National Science Foundation 2008) on standardized science tests despite increased investments in public education. Expenditures for public elementary and secondary education increased from \$7,435 per pupil in 1993 (\$324 billion) to \$9,390 in 2005-2006 (\$461 billion) in constant 2006 dollars, with a projected increase to \$11,599 per pupil (\$626 billion in 2006 dollars) in 2018 (National Center for Education Statistics 2009a). Regrettably, we see little evidence that students entering postsecondary institutions in the foreseeable future will be better prepared than today's high school graduates.

The trend in bachelor's degree attainment for Hispanics is particularly problematic. In another generation, Hispanics' share of bachelor's degrees earned in 2030 is expected to be only about two-thirds the number required to equal their percentage of the population (Figure 2). An important point must be made about the underrepresentation of Hispanics, and to a lesser degree that of blacks and Native American/Alaskan Natives, illustrated in Figure 2. The data shown are for degrees earned in a specific year; however, the implied underrepresentation over long periods of time is even more significant. For every year that a racial or ethnic group remains underrepresented, the further behind it will become in terms of cumulative or total number of degrees earned. In

other words, there is a compounding effect of long-term underrepresentation.

On the other hand, whites and Asian/Pacific Islanders are consistently overrepresented in terms of the number of bachelor's degrees earned. The consequence of long-term overrepresentation among whites and Asian/Pacific Islanders (perhaps for them the "best of times") and long-term underrepresentation of other groups, especially Hispanics (seemingly the "worst of times") is that the *overall* racial/ethnic disparity among holders of a bachelor's degree will increase over time. In a sense, the rich get richer and the poor get poorer. And, of course, since a bachelor's degree is almost always required to enter a graduate program, the effect on educational advancement is compounded, this time at the level of the doctorate. Thus, *the educated get more educated*.

Academic Trends in Doctoral Degrees

Perhaps not surprisingly, the overall pattern among earners of doctorates (see Figure 3, in Supplemental Materials in the Spring 2011 edition of *CURQ on the Web*) is similar to the pattern of bachelor's degrees conferred. Whites and Asian/Pacific Islanders are overrepresented in attainment of doctoral degrees, with Asian/Pacific Islanders earning doctorates at a rate almost double their proportion of the population. Again, we see an encouraging trend for blacks and Native American/Alaskan Natives over time, with a possibility of proportional representation of earned doctorates within the next generation. The trend for Hispanics continues to be dismal and only becomes worse at the level of the doctorate, due to a relatively slow increase in number of bachelor's degrees earned and a rapidly rising population of Hispanics. As a consequence of consistent underrepresentation of Hispanics among degree recipients, combined with long-term trends of greater degree earning by blacks and overrepresentation for whites and Asian/Pacific Islanders earning degrees, Hispanics' share of doctoral degrees relative to their proportion of the population will drop in the future. In other words, Hispanics are losing ground in higher education.

Doctorates Relative to Bachelor's Degrees

The attainment of a doctoral degree is not only an important academic objective for an individual; it is a critical element of the stability and sustainability of the U.S. economy. For whites and Asian/Pacific Islanders, the Equality Index Value of doctoral recipients (Figure 3) is equal to or greater than the Equality Index Value of bachelor's recipients (Figure 2). This means that the likelihood that an individual with a bachelor's degree will earn a doctorate (D-B Index) is greater than expected, relative to the percentage of bachelor's degrees received by whites and Asian/Pacific Islanders (see Figure 4, in Supplemental Materials in the Spring 2011 edition of *CURQ on the Web*). Although Asian/Pacific Islanders earn doctorates at a rate that greatly exceeds their representation in the population, their D-B Index shows a pattern of decrease over time because the relative increase in the bachelor's degrees they earn (Figure 2) is projected to be greater than the increase in doctorates attained (Figure 3). Conversely, the $EIV_{\text{doctorate}}$ (Figure 3) of blacks, Hispanics, and Native American/Alaskan Natives is lower than their $EIV_{\text{bachelor's}}$ (Figure 2). In short, blacks, Hispanics, and Native American/Alaska Natives who earn bachelor's degrees have less of a chance of moving on to a doctorate compared to whites and Asian/Pacific Islanders (Figure 4). In 2030, blacks are projected to show an increased D-B Index, with only a slight change in the D-B Index for whites, Hispanics, and Native American/Alaskan Natives.

Although a detailed examination of degrees earned, by discipline, by different racial and ethnic groups is beyond the scope of this article, the relationships shown in Figure 4 partially reflect the fact that a bachelor's or master's degree is more likely to be the common terminal degree in some fields than it is in others. Also, some disciplines have historically been more likely to be chosen by members of different racial and ethnic groups. For example, in computer science and information systems, a field with relatively large numbers of Asian/Pacific Islanders (National Center for Education Statistics 2010b), the overall D-B Index is 0.018, meaning only about 1 in 50 individuals with a bachelor's degree in computer science and information systems proceeds on to the doctorate. In education, the overall D-B Index is 0.077. In other words, the recipient of a bachelor's degree in education

is four times as likely to continue on to a doctorate as someone with a bachelor's degree in computer science and information systems. Although blacks are almost twice as likely as Asian/Pacific Islanders to earn a doctorate in education (National Center for Education Statistics 2010b), the outcome is in part a consequence of the difference in the D-B Index of education and computer sciences. Overall, Asian/Pacific Islanders have a nine-fold greater probability of earning a doctorate in computer sciences compared to blacks and attain doctorates in computer science at almost twice the rate that Asian/Pacific Islanders earn doctorates in other disciplines.

Academic Trends in Faculty Positions

Whites and Asian/Pacific Islanders are currently employed at all types of academic institutions as faculty members (all faculty levels combined) in greater numbers than blacks, Hispanics, and Native American/Alaskan Natives relative to their representation in the U.S. population (see Figure 5A, in Supplemental Materials in the Spring 2011 edition of *CURQ on the Web*). Hispanics are the most underrepresented racial or ethnic group in the faculty ranks, although blacks and Native American/Alaskan Natives also lag far behind whites and Asian/Pacific Islanders. The absolute number of faculty positions held by blacks, Hispanics, and Native American/Alaskan Natives is increasing (National Center for Education Statistics 2009b). However, relative to projected changes in the population of these groups, progress toward equitable representation among faculty is slow. In the next generation, the faculty of academic institutions will remain predominantly staffed by whites and Asian/Pacific Islanders. In 2030, students are likely to see a faculty that is as unrepresentative of the overall student body and population at large as students experience today (Figure 5A).

Faculty Positions Relative to Doctorates

A doctoral degree is often a requirement, and generally an advantage, when seeking faculty employment. We here identify the faculty positions-to-doctorates (F-D) index, which is defined as:

$$F-D \text{ Index} = EIV_{\text{faculty}}/EIV_{\text{doctorates}} \cdot$$

The disparity among racial and ethnic groups in the F-D Index (see Figure 5B, in Supplemental Materials in the Spring 2011 edition of *CURQ on the Web*) is less than what exists for EIV_{doctorates} (Figure 4) and EIV_{faculty} (Figure 5A), which is somewhat heartening. Still, blacks, Hispanics, and Native American/Alaskan Natives at present do not attain faculty positions in proportion to their doctorates earned at the same rate as whites and Asian/Pacific Islanders.

Based on our projections, the picture is less optimistic for the future. The EIV_{doctorates} of blacks and Native American/Alaskan Natives is increasing at a faster rate than their EIV_{faculty}, which suggests that the likelihood of a black or Native American/Alaskan Native doctoral recipient finding a full-time faculty position will be lower in 2030 than it is today. This is another example of the dangers of long-term underrepresentation at any of the academic levels. Even though whites and Asian/Pacific Islanders are not overrepresented among faculty relative to doctorates earned, and the number of doctorates earned by blacks and the number of black faculty hired are increasing in absolute numbers, blacks will find it difficult to make up ground and are likely to experience a decreased F-D Index in the future. At first glance, the Hispanic F-D Index may appear to be relatively favorable today (Figure 5B) with an expectation of at least holding ground in 2030. Unfortunately, this is not the case. The small increase in the EIV_{doctorates} of Hispanics in the future (Figure 3), coupled with the existing disparity in faculty positions held by Hispanics (Figure 5A) and a rapidly increasing Hispanic population, means that very little progress is likely to be made toward Hispanics reaching representation in academia in proportion to their share of the U.S. population (Figure 5A).

Summary

Why should the U.S. be concerned about the potential effects of race and ethnicity on an individual's likelihood of earning an advanced degree? First, there are consequences to individuals and families. Despite the recent musings in the popular press that many jobs in the future may not require a college degree, there is no doubt that higher education has a long-term economic pay-off (Bowen, Chingos, and McPherson, 2009), and that it enriches a person's intellectual life to a degree that is equally important. In addition, parents with advanced degrees generally have children who in turn become more highly educated than offspring of less educated parents (National Science Foundation, 2009). Education becomes in a sense a family legacy that is passed down through the generations. The most difficult step is to educate the first family member. If we are content to relegate some individuals to a path that is less likely to lead to an advanced degree, perhaps not intentionally but rather through insufficient action and some races or ethnicities are disproportionately affected, we have reduced the opportunities for the next generation to make a different decision for themselves. Students' eyes may be opened to opportunities in science when they see someone of their own race or ethnicity on television as a crime scene investigator or a laboratory technician. However, we contend that it is a more powerful experience when a member of an individual's immediate family or community is on the faculty of a university or runs the quality-control laboratory at the local manufacturer of biomedical devices. In short, real experiences are probably still more compelling than virtual experiences. And, of course, lack of knowledge is itself a barrier to opportunity for academic success. For instance, how can an interest in bioinformatics arise when an individual does not have a rudimentary understanding of biological principles?

Looking Ahead:

- The Summer 2011 Issue will bring perspectives on "Undergraduate Research and the Tenure and Promotion Process."
- Bill Campbell will be submitting the first CUR book review on "Five High-Impact Practices: Research on Learning Outcomes, Completion, and Quality," by Jayne E. Brownell and Lynn E. Swaner (AAC&U 2010).

Second, costs accrue to the vitality of the U.S.'s social and economic structure. The U.S. simply cannot afford to waste or lose our precious human capital. The next Luis Alvarez, a Nobel laureate in physics, may be picking grapefruit in south Texas today. The next Henry Louis Gates, Jr., historian and leading public intellectual on discussion of racial issues, may be living a life of few opportunities in south Philadelphia. When the success or failure of any racial or ethnic group is disproportionately affected by environmental circumstances beyond its control, we all lose, regardless of our own race or ethnicity.

On a positive note, the intersection of demographics and higher education in the U.S. appears to have several tales to tell, and not all of them are gloomy. The story is complex and projections of future outcomes are difficult and uncertain; however, blacks and Native American/Alaskan Natives are making headway in higher education, thanks in no small part to the investment of time, money, creativity, and lots of hard work on the part of many individuals and organizations. Those efforts have merely revealed the talents of blacks and Native American/Alaskan Natives that had not yet been encouraged to flourish. Efforts to promote and expand opportunities for such individuals must continue. All of us would prefer to measure these groups' drive for equitable representation among degree recipients and faculty positions in terms of years rather than decades. We suspect that there exists a "tipping point" of self-sustaining growth with respect to attainment in higher education. By this tipping point, we mean a point at which the positive feedback of an environment that includes exposure to higher education as a thread that runs throughout an individual's experiences leads to sustainable increases in educational expectations and educational opportunities that require fewer supporting mechanisms.

The present and future of Hispanics in higher education appears to remain exceptionally challenging. Hispanics have a rapidly growing population, a lower rate of college attendance, and a higher rate of unemployment among high school graduates compared to whites (National Center for Education Statistics 2010b; American Council on Education 2010). About 18 percent of Hispanic students speak English with difficulty, compared with 1 percent of whites and blacks (National Center for Education Statistics 2010a). Along with many other disparities that

break down, in general, along racial or ethnic lines, those factors will conspire to forge a difficult environment in which to promote growth in postsecondary enrollment, and attainment of the highest academic and professional degrees. The good news is that we can effect change. Some strides have been made among blacks and Native American/Alaskan Natives. The next challenge will be to increase efforts to support Hispanics. Parts of the existing models developed to decrease disparities in postsecondary education might prove useful, but new approaches also will be necessary.

Regardless of the overall suite of approaches taken, public two-year colleges will continue to play a significant role. A recent study by the National Center for Public Policy and Higher Education (2010) found that over the past decade, nonselective colleges and universities that accept at least 80 percent of their applicants accounted for most of the increases in college-completion rates in 33 of the 44 states in the study. Furthermore, Hispanics attended public two-year colleges in higher percentages than any other racial or ethnic group. In 2008, 49.3 percent of Hispanics in college were enrolled at public two-year institutions (National Center for Education Statistics 2010c). The U.S. will have to make substantial investments in two-year colleges to develop innovative strategies to encourage and support Hispanic students. Moreover, support mechanisms must be maintained through the bachelor's degree and into doctoral programs to keep pace with the growing Hispanic population, much less get ahead of the growth curve. At the current rate of advancement toward more equitable representation of Hispanics in higher education, progress is occurring not over a scale of years, but generations. None of us should be satisfied with that.

Addendum 1: Throughout this article we use U.S. Census Bureau definitions of racial and ethnic groups (U.S. Census Bureau 2003). Although racial categorization is a dicey affair on many levels, most census respondents (about 98 percent) identify themselves as a single race. It cannot be disputed that an individual's race is an important factor in many aspects of life; hence, the traditional use of race as a gross level of categorization. The caveat to our emphasis on race and ethnicity is the realization that by doing so we sacrifice important distinctions that truly matter. The Census Bureau's

definition of the racial category “white” is a person who responded “No, not Spanish/Hispanic/Latino” and who reported “white” as the only entry in the question about race. People who identify their origin as Hispanic may be of any race. Thus percentages of Hispanics should not be added to percentages for racial categories. Hispanic identity can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person’s ancestors before their arrival in the U. S. Individuals who characterize themselves as Mexican, Mexican American, Chicano, Puerto Rican, or Cuban or whose origins are from the Spanish-speaking countries of Central or South America, the Dominican Republic, or people identifying themselves generally as Spanish, Spanish-American, Hispano, Latino, and so on are categorized as Hispanics. Most Hispanics (93.5 percent, 2000 census) classify themselves as white only.

Addendum 2: To predict the racial and ethnic makeup of faculty in 2030, we used the mean yearly rate of change from 2003 to 2007 (National Center for Education Statistics 2008). Racial and ethnic disparities in representation among faculty were even greater in the years prior to 2003 (National Center for Education Statistics 2009b). Inclusion of earlier years and, therefore, a longer time interval in which there exists underrepresentation of blacks, Hispanics, and Native American/Alaskan Natives even greater than exists today would lead to a lower mean yearly rate of change than is representative of current conditions. For example, the percentage of faculty positions held by blacks in all degree-granting institutions combined increased 3.4 percent per year (yearly mean) from 1992 to 2003 (National Center for Education Statistics 2009b). The rate of increase of faculty positions held by blacks was 6 percent per year from 2003 to 2007 (National Center for Education Statistics 2008). Furthermore, significant efforts to increase faculty diversity and the initiation of programs and grants through the National Science Foundation and other organizations to support underrepresented groups in graduate studies might be expected to have paid off in faculty positions held in 2003-2007, the latest period for which data were available.

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Craig Longtine is a biology professor and Director of Undergraduate Research at North Hennepin Community College, a diverse (32% students of color, 71% first-generation college students, and 43% below federal poverty line), open-access institution. He and his students' current research interests include insect and plant ecology, fish behavior, plant genomics, and trends in student diversity in higher education. Since 2007, Longtine has mentored 23 North Hennepin Community College students engaged in undergraduate research. His students have made 33 research presentations at 14 local, regional and national conferences in 6 different states. Longtine has been working for several years at both the regional and national level to integrate undergraduate research into two-year colleges. He received his PhD in entomology from the University of Minnesota.

*Megan Jones is a geology professor at North Hennepin Community College. Her broad background and experience in marine micropaleontology/paleoceanography, sedimentology/stratigraphy, and field geology provides her students a variety of opportunities to pursue field experiences and undergraduate research. She and her students' research interests include examining oceanographic and climatic changes using benthic and planktic foraminifera and developing and testing data-rich curricula for introductory geology courses. Jones is part of the NSF-sponsored Building Core Knowledge team that has produced a groundbreaking, data-driven lecture and lab exercise book, *Reconstructing Earth's Climate History* (out late 2011). In addition, she is a co-founder of GARNET, the Geoscience Affective Research NETWORK, an NSF-sponsored collaborative of investigators examining the relationship between student affect, in this case, motivation, and their success in introductory geology classrooms. She received her PhD in geology from Louisiana State University.*