



Kirwan Institute
Many Differences **One Destiny**

October 2011

**Quality Matters:
Achieving Benefits Associated
With Racial Diversity**

Commissioned by the Kirwan Institute for the Study of
Race and Ethnicity, The Ohio State University
Democratic Merit Project
With Support from Public Interest Projects – Fulfilling the
Dream Fund

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Quality Matters: Achieving Benefits Associated with Racial Diversity

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In June 2003, the U.S. Supreme Court ruled on two distinct but interrelated cases regarding the application of race conscious admissions at the University of Michigan. In deciding those two cases the Court was guided by the 1978 decision in the case of *Regents of the University of California v. Bakke*, the previous U. S. Supreme Court ruling on affirmative action practices in college admissions. With the 2003 decision concerning law school admissions at Michigan, *Grutter v. Bollinger*, the Court's majority not only upheld the use of race, but also reaffirmed Justice Lewis Powell's opinion on *Bakke*. Powell claims that the attainment of a diverse student body broadens the range of viewpoints collectively held by those students and subsequently allows an institution to provide an atmosphere that is "conducive to speculation, experiment and creation—so essential to the quality of higher education" (p. 312). Because such educational goals are essential to the nation's future and are protected under the First Amendment, Powell concludes that race-conscious admissions practices, when narrowly tailored to meet these goals, serve a compelling state interest. This argument has come to be known as the *diversity rationale*. Writing for the majority of the Court on *Grutter*, Justice Sandra Day O'Connor reinforced Powell's rationale and stated, "student body diversity is a compelling state interest that can justify the use of race in university admissions" (p. 330).

Even so, few expect the 2003 rulings to be the Court's last words regarding race conscious admissions practices in higher education. O'Connor herself expected such practices to phase out within 25 years of the *Grutter* ruling, and many experts also suspect that the Court will rule again on race conscious admissions in higher education within that time frame. According to a recent Washington Post article (Barnes, 2011), one case coming out of Texas (*Fisher v. University of Texas*) is at the stage whereby the next step is to file a petition to request a Supreme Court review, which must be submitted by mid-September 2011. Another case coming out of Michigan concerning a ballot initiative passed in 2006, which banned the state's public colleges and universities from considering "race, sex, color, ethnicity, or national origin," was reviewed by a panel of the U.S. Court of Appeals for the 6th Circuit and will likely receive a full circuit review before a petition for a Supreme Court review is filed. When the Supreme Court reconsiders race conscious admissions practices in higher education, they will certainly expect colleges and universities to generate much stronger proof concerning if and how diversity actually improves students' learning and experiences.

This manuscript identifies problems with Powell's diversity rationale and addresses them by highlighting what we currently know through empirical research about the relationship between racial diversity and educational benefits. Given the page constraints, however, this synthesis is not comprehensive but focuses on recent published research, mostly within the study of higher education, that enhances the studies' capacity to generalize findings to a wider range of colleges and universities. This manuscript also

responds to Supreme Court decisions regarding race conscious affirmative action, so the examination of diversity is limited to studies that focus on race, even though consideration of diversity on college campuses is typically much broader in scope.

PROBLEM

Although the U. S. Supreme Court upheld the University of Michigan Law School's admissions procedures, it passed by a slim 5 to 4 margin. Moreover, the Court struck down Michigan's undergraduate admissions policy in *Gratz v. Bollinger* by a 6 to 3 margin, contending that the practices were too mechanistic, relying too heavily on point indices to determine eligibility. Justice Clarence Thomas, who disagreed and dissented with the majority's opinion in *Grutter*, remarked:

...attaining 'diversity,' whatever it means, is the mechanism by which the Law School obtains educational benefits, not an end of itself. The Law School, however, apparently believes that only a racially mixed student body can lead to the educational benefits it seeks. How, then, is the Law School's interest in these allegedly unique educational 'benefits' not simply the forbidden interest in 'racial balancing,' *ante*, at 17, that the majority expressly rejects? (p. 355; emphasis in original).

Thomas' remarks point to both the importance and fragility of the educational benefits argument in Michigan's defense of their admissions policy. Since the 2003 decisions, opponents of affirmative action have more forcefully challenged the educational benefits claims.

In 2004, the National Association of Scholars, an organization that has vigorously opposed affirmative action, posted on their website a report by Russell Neili (2004). The first sentence of this report claimed:

"Recent social science research has not been kind to supporters of affirmative action... a growing body of research by sociologists, economists, and political scientists has been accumulating which seriously calls into question many of the most cherished assumptions of affirmative action supporters regarding the effects of race-based preferences in university admissions."

Neili, a lecturer at Princeton, proceeds to cite studies showing that (1) "elite" institutions do not contribute more to students' chances of obtaining wealth, power, and influence than do their less selective counterparts; (2) affirmative action policies contribute to the lower grades received by black and Hispanic students, which in turn increase the risk of dropping out, discourage many from pursuing careers in academia, and lower the chances of passing the bar exam; (3) another negative effect of mismatching black and Hispanic students by placing them in institutions where most of the white and Asian students are academically better prepared is increased stereotype vulnerability, which reduces those students' academic performance and increases psychological harm; (4) white and Asian students often harbor considerable resentment toward black and Hispanic beneficiaries of racial preference policies, which can further reinforce negative racial stigmas; and (5)

affirmative action rewards underachievement and negatively affects how much blacks and Hispanic students learn in school.

Although Neili expertly reviews the handful of studies that support his claims, he does not review any “recent social science research” that could help him to better understand the problems he identifies. Instead, he limits his review to only William Bowen and Derek Bok’s *The Shape of the River* (1998). Although this is an important and widely publicized study about diversity, even Sandra Day O’Conner extends beyond this reference in her 2003 opinion (see p. 18). Since then, even more studies have been published. For example, Alon and Tienda (2005) provide empirical findings that offer a counter perspective to the mismatch hypothesis upon which Neili relies so heavily to explain the achievement gap. Likewise, many have also responded specifically to Richard Sander’s research concerning the negative effects of race conscious admissions on producing black lawyers. For example, the *Stanford Law Review*, that published Sander’s study, even dedicates a whole volume (#57, May 2005) to critiques of his findings.

Curiously, Neili also draws from Claude Steele’s research to make the case that affirmative action erodes black and Hispanic students’ confidence by making them more vulnerable to stereotype threat, which in turn reduces their ability to learn and perform in college. Steele, however, does not share this reasoning, and by contrast, has argued that pervasive negative racial stereotyping about intellectual inferiority, not affirmative action is the fundamental problem (Steele, 1997). When it comes to the relationship between stereotype threat and race conscious admissions practices, Steele also argues in his expert testimony in support of the University of Michigan that stereotype threat depresses the standardized test performance of African Americans, and therefore test scores have limited value for assessing those students’ capacity to succeed in college. Thus, Steele employed his research on stereotype threat to make the case that overreliance on test performance and not affirmative action is limiting educational opportunities for African Americans and creating negative social consequences.

Given Steele’s arguments, it stands to reason that if the fundamental problem is widespread racial stereotyping about intellectual inferiority, the absence of African Americans in elite institutions is certainly more conspicuous and would reinforce those negative racial stereotypes more so than the less obvious alleged effects on individual students’ academic confidence. Even if students understand that they are more vulnerable to negative racial stereotypes at elite colleges, wouldn’t they still prefer to be admitted rather than be excluded based in part on overreliance on test scores and therefore not have that educational opportunity? After all, doesn’t obtaining a prestigious degree- even with a less than stellar undergraduate record- still contribute positively in the long run to one’s psychological well-being and other’s opinion of their intellectual capacity? Even Neili, in his report, acknowledges the prestige factors associated with obtaining such high-caliber degrees.

In short, had Neili conducted a more rigorous review of the social science research, it would contribute more to a genuine understanding of the issues concerning race conscious admissions. Since he completed his report, more research has been published, which provides a more complete understanding of the potential impact of those practices. Still, Neili raises some important issues that should not be overlooked because his claims are empirically grounded. One issue that is especially relevant to this manuscript concerns the educational benefits associated with racial diversity.

In making the case that affirmative action contributes to a negative racial campus climate and therefore does not contribute positively to the overall educational experience of students, Neili cites two key studies. First, he reports findings from sociologist Doug Massey and his colleagues' book, *The Source of the River* (2006), which reveals that whites and Asians "tended to perceive a great deal of distance between themselves and blacks who benefited from affirmative action" (p.143). Neili argues that such sentiments "have negative consequences not only for the academic performance of the stereotype-vulnerable students but also for the quality of race relations on campus ..." (p. 32). To confirm the latter point, he cites the Rothman et al. (2003) study that shows that the proportion of black student enrollment is negatively associated with students' overall satisfaction with their university experience and their assessment of the quality of their education and the work ethic of their peers. By contrast, the increased presence of Asian Americans proves to have some positive impact. Given these findings, Neili reasons:

"white students view the presence of Asian students on campus very differently than the presence of black students, and that the difference is almost certainly due to the lower academic qualifications of the black students and to the sense that many blacks have benefited unfairly from affirmative action programs." (p. 34)

Thus for Neili, these empirical findings suggest that affirmative action perpetuates racial antipathy and subsequently undermines the promised educational benefits associated with increased racial diversity in the student body.

While Neili offers an accurate report of the findings from both the Massey and Rothman studies, his interpretation fails to account for two troubling trends regarding racial antipathy in higher education. First, Asian Americans are also targets of racial antipathy by white students. There are numerous documented examples of anti-Asian sentiment expressed by white students, one of which was famously posted by a UCLA student in March 2011 on YouTube (Mashhood & Parkinson-Morgan, 2011). In fact, on campuses where Asian American enrollment has increased substantially, Asian American students report experiencing higher frequencies of discrimination than any other group on campus (Hurtado et al., 1999; Sidanius et al., 2008).

If this UCLA student had been assigned to live with another student of a different race, she might have improved her comfort level with people of different groups. Indeed, in a study of UCLA students, Sidanius and colleagues (2008) found that students who lived with either black or Latino roommates reported positive changes in attitudes toward other racial groups. Curiously, they also found that white and black students who lived with Asians tended to show increased prejudice against Asians after living with them. Since Asians are not considered beneficiaries of race conscious admissions, such increased racial prejudice cannot be attributed to such practices. Moreover, the elimination of those practices in California through the passing of Proposition 209 in November, 1996 also failed to eliminate racial insensitivity toward blacks on campus as evidenced by the incident at UCSD whereby mostly white students mocked a predominantly African American community in a party themed the “Compton Cookout” (Khan, 2010).

Another trend unaccounted for by Neili is that black students who attend institutions that do not consider race in admissions, such as community colleges, also experience racial antipathy. For example, within a week of the beginning of the 2009-2010 academic year at Manchester Community College in Connecticut, three racially charged incidents that targeted black students not only made them feel unwelcomed but threatened their personal safety (Raus, 2009). Such examples, which are not uncommon, further suggest that affirmative action is not the root cause of negative racial attitudes and interracial alienation and conflict on campus. If the goal is to improve mutual respect and to build “true” cross-racial friendships, eliminating race conscious admissions practices will not likely contribute to achieving that goal since such actions do not necessarily address stereotypes and core beliefs about how race operates in society.

Still, we should not discount the Massey and Rothman findings. To better understand why increased proportions of underrepresented racial minorities fail to yield the educational benefits reasoned by Justice Powell, I now examine an emerging body of social science research.

THE FUNDAMENTALS

It is nearly impossible to find a published study grounded in the field of higher education research that rejects Justice Powell's diversity rationale. Opponents of affirmative action attribute this research anomaly to liberal political leanings. Such charges are misguided because those critics do not have a deep understanding of the literature or fundamentals that guide research in higher education. Decades of research concerning how college affects students (see Astin 1993a; Pascarella & Terenzini, 2005) have conclusively shown that the relationship between students and the college environment is both reciprocal and dynamic. In other words, one of the fundamental principles in higher education research is what is referred to as an ecological perspective, which posits that there are tight interconnections between individual change, institutional change, and social change. Perhaps no one has made a stronger case for this perspective than the late Eric Dey.

Ecological Perspective

Dey's life work empirically illustrates the impact of the dynamic interconnections between human and interpersonal environments on a range of student outcomes. In a 1996 study, for example, he shows not only that undergraduate students' political orientations during college change in ways that align with general social trends, but also that institutional contexts can conditionally influence those orientations by either reinforcing or buffering against larger social influences. In a subsequent study, Dey (1997) statistically models the influence of college peers on students' political orientations across distinct social and political eras to better assess the unique effects of institutional context and the larger social context. He finds that students consistently are influenced by their campus peers, regardless of the social norms of the era in which they attend college. In other words, there is a tendency for students to change in the ways consistent with institutional peer norms. At the same time, however, he also finds that the larger social context has a significant effect on students above and beyond the influence of the campus. These findings suggest that researchers must consider both societal trends as well as the campus context when examining how students' college experiences might shape student learning. Dey contends that "Because the influences of general campus context and the larger social context operate independently, these contextual factors can work in concert with or in opposition to one another, depending upon institutional and historical circumstances" (1997, p. 410).

Hurtado, Milem, Clayton-Pedersen, and Allen (1998, 1999) apply this ecological perspective more specifically to understanding campus diversity by turning their attention to campus constituents' attitudes, perceptions, and observations about the environment. They focus on variations among campus constituents, especially with respect to racial differences. For example, they cite studies showing that when it comes to engaging with diversity, white students tend to view this as an opportunity to be exposed to different cultures, whereas African American students tend to view this as an opportunity to enhance their institution's capacity for inclusion. However, Hurtado et al. do not consider these differences as being necessarily in conflict with

one another, and they maintain that individual attitudes and perceptions tend to be more malleable and, as a result, can be differentiated from the more stable institutional norms and beliefs that are used to characterize an organization's culture. The institutional culture, by comparison, can magnify group differences in ways that aggravate the racial climate and intensify racial antipathy.

Also, within the framework offered by Hurtado et al. (1998, 1999), racial climate is not limited to perceptions and attitudes (what they term the "psychological climate"), but includes the institution's structure and history as well as people's interactions across differences. Moreover, this framework assumes that students are educated in contexts that vary from campus to campus, and similar to Dey's perspective, that variations in racial climate are shaped by a range of external and internal forces. Hurtado et al. (1998, 1999) identifies four distinct dimensions in their campus climate framework, and Milem, Chang and Antonio (2005) add a fifth dimension (organizational structure) to understanding the key forces that can shape the impact of campus diversity efforts.

Although there is not enough space here to review those dimensions, one key advantage of applying an ecological perspective to Powell's diversity rationale is that it offers a more nuanced and realistic contextual understanding of the relationship between racial diversity and educational benefits. An ecological perspective suggests that there are many key internal and external factors that potentially can facilitate or undermine the impact of diverse educational settings on students' learning and experiences. Unlike Powell's vision of the educational benefits equation whereby simply admitting more racial minority students would necessarily result in positive outcomes, this ecological perspective shows that in order to achieve those benefits, campuses must account for many different but interrelated moving parts shaped by multiple forces that can affect the outcomes associated with race conscious admissions practices. Indeed, early studies published in peer-reviewed journals, that examine the diversity rationale (see, for example, Antonio et al., 2004; Chang, 1999; Chang et al., 2003; Gurin, 1999; Gurin, Dey, Hurtado, & Gurin, 2002; Gurin, Nagda, & Lopez, 2004) generally indicate that Powell's diversity rationale has merit, but is less than complete. These studies show that higher education has a compelling interest to enroll a racially diverse student body, but that the educational benefits associated with diversity are not guaranteed, but conditional. To better illuminate this argument, the next section will highlight a set of recent published studies.

QUALITY NOT JUST QUANTITY

According to Justice Powell, “There is *some relationship* between numbers [of minority students on campus] and achieving the benefits to be derived from a diverse student body, and between numbers and providing a reasonable environment for those students admitted” (p. 324, italics added). While Powell acknowledges the importance of the environment for achieving benefits, he did not further elaborate on how it facilitates those benefits, adding only that “unplanned, casual encounters” within a diverse student body can lead to “improved understanding and personal growth” (p. 313). Powell further argues that “it is hard to know how, and when and even if this informal ‘learning through diversity’ actually occurs” (p. 313).

Powell’s statements are reflective of the confusion surrounding educational benefits associated with racial diversity. Accordingly, I will address three points from his statements that are especially relevant to current research. Most important, I will first address whether or not “learning through diversity actually occurs.” Second, I will address what Powell describes as the relationship between numbers and benefits. Lastly, I examine Powell’s statement that “unplanned, casual encounters” lead to improved educational outcomes.

Does Diversity Contribute to Learning?

Powell alludes to “encounters” that provide wide exposure to the ideas and mores of students as diverse as this nation of many peoples” (p. 312). One way researchers have documented those “encounters” is by measuring undergraduate students’ frequency of interacting with peers who do not identify with the same race, or what I will refer to as students’ frequency of cross-racial interaction. This area of diversity research has been widely studied and is rooted in a rich body of sociological and psychological research concerning residential, employment, and school desegregation. Regarding Gordon Allport’s (1954) theory concerning cross-racial contact, Pettigrew and Tropp (2006) identified over 500 studies that build upon that seminal work alone. This large pool of scholarship that addresses similar research hypotheses enabled Pettigrew and Tropp to conduct a meta-analysis that offers a systematic review of the literature by statistically testing the results of multiple studies. They find that cross-racial interaction significantly reduces prejudice across a variety of samples and situations.

Likewise, in higher education research, cross-racial interaction has been closely studied and has been shown to be positively associated with a wide range of student outcomes in the higher education context, including improving academic skills (Denson & Chang, 2009; Gurin, 1999; Gurin et al., 2002; Hu & Kuh, 2003; Luo & Jamieson-Drake, 2009); academic and social self-concept (Antonio, 2004; Chang, 1999; Chang, Astin, & Kim, 2004; Chang et al., 2006; Denson & Chang, 2009; Gurin et al., 2002; Nelson Laird, 2005); cognitive outcomes

(Antonio et al., 2004; Bowman, 2010; Chang et al., 2006; Denson & Zhang, 2010; Gurin et al., 2002; Nelson Laird, 2005); personal growth/development (Hu & Kuh, 2003; Luo & Jamieson-Drake, 2009); teamwork and leadership skills (Denson & Zhang, 2010; Luo & Jamieson-Drake, 2009); prejudice reduction (Gottfredson et al., 2009; Zúñiga, Williams, & Berger, 2005); social distance (Odell, Korgen, & Wang, 2005); perceived exposure to diverse ideas (Antonio et al., 2004; Gottfredson et al., 2009); racial/cultural understanding and engagement (Antonio, 2001; Astin, 1993a; Chang et al., 2006; Denson & Chang, 2009; Denson & Zhang, 2010; Gurin, 1999; Gurin et al., 2002; Hu & Kuh, 2003); pluralistic orientation (Engberg, 2007; Jayakumar, 2008); social agency and civic development (Astin, 1993a; Bowman, 2011; Chang et al., 2004; Gurin, 1999; Gurin et al., 2002; Hurtado, Engberg, Ponjuan, & Landreman, 2002; Nelson Laird, 2005; Zúñiga et al., 2005); retention (Chang, 1999); well-being (Bowman, 2010b); and satisfaction with college (Astin, 1993a; Chang, 1999; Luo & Jamieson-Drake, 2009).

Given this remarkable body of literature, it is now possible to conduct meta-analyses to examine whether the various empirical findings reveal additional systematic patterns within the higher education context. Denson (2009) published the first of such studies to examine whether participating in curricular/co-curricular diversity-related activities during college reduces undergraduate students' racial bias. Using 27 studies as her sample, she found that while the diversity-related activities on a whole showed a moderate effect on reducing racial bias, diversity-related activities such as participating in a prejudice reduction workshop were even *more* effective when they also incorporated a cross-racial interaction component. Based on her findings, she concludes that a student's frequency of interacting across race moderates the effects of other diversity-related activities on reducing students' racial biases.

Using meta-analyses, Bowman (2010a) explores the relationship between college diversity experiences and cognitive development, as well as the factors that might contribute to the magnitude of that relationship. Using 23 studies for his sample, he finds that having higher frequencies of cross-racial interactions, among other diversity-related experiences, were associated with gains in cognitive skills, cognitive tendencies, and multiple/other cognitive outcomes. These positive effects are apparent not only for cognitive tendencies but also for basic cognitive skills, such as critical thinking and problem solving. Furthermore, Bowman finds that interactions with racial diversity are more strongly linked with cognitive growth than interactions with nonracial diversity, which underscores the particular educational importance of fostering a racially diverse student body. Bowman concludes that although there is some variation in the results of individual studies examined in his analyses, the evidence for the cognitive benefits of college diversity experiences is quite strong.

While these findings make the case that “encounters” with people of different races contribute to undergraduate learning, they do not directly address what Powell refers to as the relationship “between numbers [of minority students on campus] and achieving the benefits to be derived from a diverse student

body.” This relationship is especially important to the affirmative action debate because race conscious admissions practices solely address increasing the numbers of underrepresented racial minority students, with the assumption that this alone will increase frequency of cross-racial encounters. Therefore, the defense of those practices rests in part on evidence showing that by increasing the numbers of racial minority students, colleges and universities also increase students’ frequency of cross-racial interactions, and in turn, add value to the educational environment in ways that enrich all students’ learning.

What’s the relationship between numbers and benefits?

For opponents of affirmative action, Powell’s reasoning that there is “some relationship” between numbers and benefits implies that admitting more racial minority students directly produces positive outcomes. If not, it would indicate that there is no relationship between racial diversity and educational benefits. For example, Neili points to two studies (Massy et al. 2006; Rothman et al., 2003) that examine this direct relationship to discredit Powell’s diversity rationale. I interpret Powell’s statement differently and emphasize the concept of “some” in his statement about the relationship between numbers and benefits. As discussed earlier, an ecological perspective suggests that there are many key internal and external forces that potentially can facilitate or undermine the impact of diverse educational settings on students’ learning and experiences. Even Powell recognizes that other factors, such as the environment, may well mediate that relationship. So, in research terms, the impact of compositional diversity may not be *direct* but *indirect*. Jayakumar (2008) documents such a relationship.

Jayakumar tests whether white students’ experiences with diversity during college lead to their development of what she terms *pluralistic orientation* and *leadership skills*. Pluralistic orientation refers to students’ ability to see the world from someone else’s perspective, their openness to having their views challenged, their tolerance of others with different beliefs, and their ability to discuss and negotiate controversial issues as compared with the average person of the same age. The leadership skills measure students’ self-ratings of various aspects of leadership ability including one’s capacity to negotiate controversial issues and self-assessment of leadership ability, public speaking skills, and social self-confidence. The longitudinal weighted sample for her study included 7,689 whites from 226 institutions.

Unlike previous studies, Jayakumar employs structural equation modeling (SEM) to statistically test the relationships between key predictor variables experienced at one time, and the pluralistic orientation and leadership skills experienced at a later time. This enables her to examine both the *direct* and *indirect* statistical effects of her key variables, which also include numerical/compositional diversity (percentage of students of color), students’ frequency of cross-racial interaction, and an estimate of the campus racial climate based on the overall frequency of cross-racial interactions among students within an institution. She also examines

whether the effects of these key variables are moderated by the racial composition of students' precollege neighborhood.

Of most interest to this manuscript are the findings concerning numerical (or compositional) diversity of the college environment. Jayakumar finds that compositional diversity has a positive *indirect* effect on white students' pluralistic orientation, and to a lesser degree, leadership skills, with the effect being generally stronger for those from segregated precollege neighborhoods. Jayakumar contends that the effects of compositional diversity are indirect because they are dependent on the quality of an institution's racial climate as measured by the aggregate level of cross-racial interaction among students. As identified statistically through SEM, compositional diversity contributes to greater cross-racial interaction among students (a positive racial climate), which in turn increases a student's own frequency of contact. This dynamic set of relationships, she concludes, contributes to students' pluralistic orientation and leadership development.

Jayakumar's findings show that the composition of the student body is statistically relevant to the benefits equation. Unlike other studies, hers shows that the relationship between what Powell calls "numbers and benefits" is not hypothetical but empirical, and that there is clearly some relationship. Although compositional diversity does not show direct effects on her two learning outcomes, it contributes significantly to other aspects of a diverse educational setting and it can have a direct positive effect on the outcomes. Most notably, she emphasizes the "quality" of the educational environment for mediating the indirect effects of compositional diversity. A set of recent studies illuminates the importance of considering quality in achieving the benefits associated with racial diversity.

Are benefits unplanned and casual?

As exemplified by Jayakumar's study, statistical advancements have enabled researchers to better capture the impact of unique college characteristics and experiences on students. These advancements allow for a better account of the ecological dynamic discussed earlier, which allows researchers to isolate both the unique and overlapping effects of the many different interrelated parts that contribute to student learning. These approaches were not available to me when I completed my dissertation study on diversity in 1996, for which a portion was later published (Chang, 1999). Since then, I have teamed up with other researchers to apply more sophisticated statistical approaches toward understanding the educational benefits equation.

One set of longitudinal national survey studies sheds new empirical light on the educational benefits equation. These longitudinal national survey studies of college students more closely examine the educational impact of engaging in cross-racial interaction. These studies also apply hierarchical linear modeling (HLM) developed by Raudenbush and Bryk (1986, 2002), which make it possible to account for hierarchical differences

in units of analysis, so that for example, the effects of an individual student's own frequency of cross-racial interaction (CRI) as well as the average level of the same behavior among students or institutional levels can be more appropriately and simultaneously examined.

In the first of three longitudinal survey studies of a nationally representative sample of undergraduate students, my colleagues and I (Chang, Denson, Saenz, & Misa. 2006) found that the peer average level of cross-racial interaction positively affects students' self-comparison of gains made since entering college, particularly in their knowledge of, and ability to accept different races and cultures above and beyond their own level of cross-racial interaction during college. Thus, we found that even those students who have very little cross-racial interaction, yet are part of a student body that has high average levels of interaction, tend to report greater individual gains in their openness to diversity than those who have the same level of interaction but are a part of a student body with low average levels. These findings regarding institutional context, as measured by the peer average level of cross-racial interaction, are similar to those from another unrelated study published by Umbach and Kuh (2006). These researchers also used HLM, but used a different sample of students to examine institutional measures of diversity on a variety of outcomes such as measures of student engagement, perceptions of a supportive campus environment, gains in learning, intellectual development, and social awareness. Among their findings was that institutional support for encouraging contact among students of different economic, social, and racial backgrounds has positive effects on those outcomes and are especially strong for students at liberal arts colleges.

Nida Denson, one of my co-authors from our 2006 study, and I (Denson & Chang, 2009) further explored this unique contextual effect using HLM. Confirming previous findings, we found that higher levels of cross-racial interactions were associated with positive ratings of students' own self-efficacy, academic skills, and self-change in their capacity to engage with racial-cultural differences, even after controlling for a range of relevant student and institutional characteristics including pretests of the outcome measures. At the institution level, we found that the peer group *average* measure of CRI had a significant positive effect on racial-cultural engagement by attenuating the *relationship* between individual CRI and racial-cultural engagement. That is, the positive association between individual engagement with CRI and this outcome gets stronger as an institution's *average* level of CRI drops. In other words, the benefits of interacting with others of different races seem to be even more significant for students when their campus peers are interacting less frequently. So, with respect to improving one's knowledge of, and ability to get along with people of different races, students' own level of cross-racial interaction is even more significant when there is a general absence of such interaction within the larger student body. We also found significant contextual effects with the peer group average of curricular/co-curricular engagement with diversity.

Taken together, the findings from these two studies suggest that the educational benefits associated with a student's own frequency of cross-racial interaction is also moderated by the overall frequency of their peer's interactions. Students benefit uniquely from being in an educational context whereby their peers interact more frequently across racial differences. It appears that certain types of institutions that possess a unique dynamic or quality linked to a set of conditions associated with positive race relations have a stronger capacity to realize the added educational benefits associated with diversity which can extend beyond the benefits related to a student's own level of cross-racial interaction. What qualities might contribute to this kind of institutional capacity? Some scholars (Richardson & Skinner, 1990; Smith et al., 1997; Allen & Solorzano, 2001; Hurtado, Dey, Gurin, & Gurin, 2003; Hale, 2004) suspect that campuses with higher levels of cross-racial interaction within the student body have in place a curriculum that reflects the historical and contemporary experiences of people of color, programs that support the recruitment, retention and graduation of students of color, and an institutional mission that reinforces the colleges' commitment to pluralism. Such campuses might also more carefully and intentionally attend to their historical legacy of exclusion, compositional diversity, and student perceptions of racial tension or discrimination (Hurtado et al., 1999).

Whatever the specific qualities, the findings show that students uniquely benefit not only from their own interactions with someone of a different race or ethnicity, but also from being enrolled in an institution that enhances interactions, since one's own individual interactions are distinct from the institutional context in which they occur. One issue with contextual effects identified through HLM, however, is that they are open to varying interpretations. On the one hand, such contextual effects may occur because of the normative effects associated with an organization. On the other hand, the contextual effects may instead be a proxy for other important institutional characteristics omitted from the statistical analyses. Thus, even though this set of findings demonstrates possible contextual effects, it is unclear as to what exactly is the source of these effects.

To better address the quality issue, Nida Denson and I conducted a third study (2010) that is currently under review for journal publication. For this study, we were less concerned with contextual effects and more concerned with students' quality of cross-racial interaction and assessment of their campus climate for supporting diversity. Specifically, we tested whether the quality of students' cross-racial interactions and perceived quality of institutional context for diversity moderated the effect of their quantity of interaction (CRI) on their academic self-concept and social agency. Although we tested these relationships using HLM, which yielded similar findings, we reported only the findings from our analyses using ordinary least squares (OLS) regression analyses because we were primarily interested in student-level effects.

Overall, the pattern of findings from our study confirms the findings from two other recent studies (e.g., Engberg, 2007; Nelson Laird, 2005) that also show that quality matters. When it comes to enhancing students' academic self-concept and social agency, the *quality* of those interactions is just as important, if not

more so than the *quantity* of interactions. This was especially the case for students' academic self-concept, whereby we found that the amount of CRI had no main effect on that outcome, but having more positive CRI had a significant positive effect. For social agency, while the amount of CRI was positively associated with increased social agency, having more positive CRI, as well as negative CRI (although to a lesser extent), also had significant main effects on students' sense of self-agency. Our findings partially replicate those of Nelson Laird (2005) which found no effects for interaction with diverse peers (amount) on both academic self-confidence and social agency, but did find a significant negative effect for negative interactions on academic self-confidence and a significant positive effect for positive interactions on social agency.

We also found that the quality of CRI moderates the benefits of interacting with students of different racial and ethnic backgrounds. This was especially the case for those who experienced negative interactions. Specifically, for those who reported having interactions that were slightly negative, rather than highly negative or only mildly positive, increased frequency of CRI tended to diminish their academic self-concept. It appears then that if a student tends to have somewhat negative CRI, having more interactions will likely enhance the negative effect of CRI on his or her academic self-concept. Conversely, when it comes to students' sense of social agency, those who reported having more positive interactions benefit even more from having higher frequencies of CRI. A similar positive effect was observed for the academic self-concept measure, but the added value was less pronounced. Thus, when students generally have positive CRI, having even more interactions tends to also enhance related benefits. Likewise, the effects of students' satisfaction with an institution's capacity to respect diverse beliefs were positive. Those who reported being more satisfied with their institution in this way also reported having higher levels of academic self-concept, a finding that is consistent with other research validating the benefits of a welcoming and supportive campus climate (e.g., Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006).

Overall, our study found that even though the pattern of effects may vary by students' level of interaction, *higher quality* interactions and perceived acceptance of diversity by one's institution strengthens the educational impact of interacting with students of different racial or ethnic backgrounds. Because students' perceptions of quality affect the impact of diversity, it stands to reason that if institutions seek to maximize related educational benefits, they should not leave it only to students to have "unplanned and casual" cross-racial encounters, but should also improve the set of conditions associated with positive race relations as discussed earlier. While Justice Powell has an intuitive grasp of the relationship between diversity and educational benefits, he falls short when it comes to explaining the process of achieving those benefits. What he fails to note is that when it comes to achieving educational benefits associated with racial diversity, institutions must emphasize not only *quantity* but also *quality*. However, he is certainly right in claiming that there is a meaningful "relationship between numbers and achieving the benefits to be derived from a diverse student body."

CONCLUSION

It is becoming increasingly clear that the impact of undergraduate education is appreciably enhanced by diversity-related efforts on colleges and universities. These efforts appear to improve students' experiences and learning by cultivating key behaviors and knowledge and by providing a unique educational context. As we are now discovering, the effects associated with racial diversity are increasingly relevant and important because we are learning that there are also promising contextual effects that are independent of student-level engagement. Moreover, based on an ecological perspective that considers the interconnections between individual change, institutional change, and social change, we also have a framework to help us better understand how institutions either achieve or fail to achieve the added benefits associated with diversity. Contrary to what Neili claims in the first sentence of his report, recent social science research has indeed been kind to supporters of race conscious admissions practices.

Justice Lewis Powell, in his opinion on *Bakke*, was certainly on the right track. We now know that learning through diversity actually occurs but that it is not simply a numbers game because the potential for this learning tends to be much stronger when it is NOT just "unplanned and casual". Rather, attending to the quality of students' own cross-racial interactions and the quality of the institutional context for diversity is critically important. The empirical findings regarding quality are perhaps the most significant recent contributions toward completing Powell's diversity rationale. When it comes to educational practice, the context in which students engage with diversity is equally important in adding value to students' learning and experiences. The issue of quality also has implications for future research.

Much of the early research on diversity mainly responds to race conscious admissions practices, and as such, is more policy driven than educationally driven. Early research also tends to be guided by Powell's oversimplified benefits equation and focuses too heavily on the numbers of underrepresented students or on establishing an ideal proportion of racially different students. While some early studies find a positive relationship between numbers and cross-racial interaction (which in turn enhanced educational outcomes), many of them also suggest that as a matter of educational practice, diversity should not be pursued by only targeting enrollment because such narrow approaches reduce the chances of obtaining broader educational benefits. More recent findings show that when the broader educational context is not seriously addressed in ways that improve both the quality of students' interactions and their perception of diversity efforts on campus, having more contact can actually dampen rather than improve educational benefits for some students.

Accordingly, if a research study includes mostly institutions with a poor context for fostering diversity, and researchers do not account for the quality of this context but assess diversity in narrow ways, the

conclusions regarding diversity drawn from such studies will be predictably negative and indifferent to diversity-related efforts. For example, in Rothman and his colleagues' study (2003), which Neili cites as empirical evidence that discredits the diversity rationale, they found that as the proportion of black students rose, the more likely it was that students would report that they personally experienced discrimination. Surprisingly, Rothman and his colleagues do not further examine or consider this important finding, even though it reflects the quality of the educational context for diversity. If they had controlled for the poor quality that existed within their institutional sample, it may well have moderated many of their results for which they interpreted as strong evidence against the "diversity model" of campus relations.

Consistent with the ecological perspective, the overall pattern of findings concerning diversity in higher education shows that when it comes to realizing educational benefits, there are many independently moving but interrelated parts/dimensions, and establishing organizational congruence and consistency among the interrelated parts makes an appreciable positive difference in the educational process. Within this context, the weakening of some diversity-related efforts, such as race conscious programming and policies, will likely have a negative effect on an institution's organizational cohesiveness and ability to address and support diversity, which can effectively reduce its overall capacity to realize related educational benefits for students.

The issue concerning whether or not racial diversity adds value in higher education seems to be well settled in educational research. What is much less clear is whether or not future policy shifts will either improve or constrain the range of tools that institutions can utilize to maximize the educational benefits associated with diversity. The range of tools available to an institution is just as important to consider today as it was when the Supreme Court ruled on *Bakke* in 1978. Of the 58 *amicus* briefs that were submitted to the Court for that case, Justice Powell cites only one of them. This brief was submitted jointly by Columbia, Harvard, Stanford, and the University of Pennsylvania, and is often referred to as the *Ivy brief*. The brief specifically points to the need for racial diversity, contending that institutions of higher learning are charged "to educate all students to deal with the problems of the society that we have, rather than the one we would like to have, [and thus] need the contribution of those whose lives have been different because of their race" (p. 15).

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