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FRIDAY, MAY 21ST, 10:00a.m. EDT

PLEASE CITE AS A REPORT OF THE AERA PANEL ON
RACIAL DYNAMICS IN COLLEGES AND UNIVERSITIES

Compelling Interest

**Examining the Evidence on Racial Dynamics
in Higher Education**

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Editors

*Sponsored by
the American Educational Research Association and
the Stanford University Center for Comparative Studies in Race and Ethnicity*

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The text of this executive summary is available in *html* format at:

<http://www.stanford.edu/~hakuta/RaceInHigherEducation.html>

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Examining the Evidence on Racial Dynamics in Higher Education

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Primary funding for this project was provided by the American Educational Research Association to Stanford University (Kenji Hakuta, Principal Investigator), with secondary funding by the Center for Comparative Studies in Race and Ethnicity, Stanford University.

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Preface

American higher education in recent years has become the locus of high profile debate about race-conscious social policy. This focus is fueled by the ever-increasing stakes associated with advanced degrees, a broad public recognition of demographic changes, and a general sense that these goods -- whether in public or private institutions - - need to be distributed in a fair and just manner. Not far below the surface of the policy debates lies a complex tangle of ideologies, histories, and blame that often interferes with rational analysis of the issues. Despite these complexities, many social scientists and educators believe that empirical research on the significance of race in American society can make an important contribution to this highly politicized and emotionally charged arena of public policy.

With these issues in mind, a project initiated by the American Educational Research Association (AERA) and the Center for the Comparative Study of Race and Ethnicity at Stanford University, was launched in the Summer of 1997 to inform public policy by examining a broad array of the social science literature that addresses the intersection of race and higher education. For this project, a panel of race relations and diversity experts from across the country was convened to discuss and explore the knowledge base on race and inter-group relations in colleges and universities.

The panel members include Walter Allen, James Banks (ex officio), Shirley Brice-Heath, Willis Hawley, Sylvia Hurtado, James Jones (Co-Chair), Yolanda T. Moses, Daryl Smith, Claude Steele, William Taylor, Ewart Thomas, William Trent, Kenji Hakuta (Co-Chair and Principal Investigator), Mitchell Chang (Executive Director), Daria Witt-Sandis (Associate Director), and Clara Shin (Legal Analyst). Through a series of meetings that became progressively sharpened, we deliberated over the cumulative knowledge of the social sciences. In the course of our deliberations, we discovered that the research related to race-conscious social policy is substantial and consistent. Scientists like to spend much of their time scrutinizing each other's theories and methodologies, something that they are trained do very well. But when one takes several steps back from these local skirmishes and examines the entirety of the work with the benefit of distance and synthesis, considerable agreement and consensus can be found.

After the panel reached this consensus, we then proceeded to consider how existing empirical findings can best inform public policy. We are not naïve about the nature of public policy, but as responsible researchers, we are aware of our social obligation to state in as clear a manner as possible what we *do* know. Given our academic strengths, we decided to compile a research volume as a means to achieve our objectives. At the initial stages of putting this volume together, the expertise of panel members was called upon to determine the topics for each of the chapters and to

recommend experts in the field who should be commissioned to write a chapter. Panelists then consulted with the writers on the outlines and drafts of each of the chapters. These collaborative efforts over the course of a year and a half have resulted in this volume, Compelling Interest: Examining the Evidence on Racial Dynamics in Colleges and Universities.

The conclusions from this work can be simply stated:

- there is clear evidence of continuing inequities in educational opportunity along racial categories;
- test-based definitions of merit are incomplete;
- race is a major social psychological factor that structures American consciousness and social behaviors; and
- racially diversified environments, when properly utilized, lead to quantitative gains as well as qualitative gains (otherwise unattainable in homogeneous environments) in educational outcomes for all parties.

The major policy implications deriving from these conclusions are equally clear:

- interventions that specifically address past and current effects of racial discrimination are still needed to achieve equality of opportunity for all.
- university admissions must operate under an inclusive definition of merit that takes into account the relative
- intellectual and civic contributions an applicant will make to the university and the broader community, and that accurately addresses the detrimental effects of social and environmental factors on the test performance of racial and ethnic groups who continue to be targets of discrimination.
- in order to be truly equitable and effective, admissions and campus diversity policies should not only consider the individual, but also reflect the salience and negative consequences of race in American society. For example, recognizing group membership as well as individual merit in the selection process will enhance perceptions of fairness and reduce ambiguity about the extent to which selection was deserved.
- colleges and universities that seek to realize the benefits of diversity for all members of the university community and of the broader society must maximize and integrate all dimensions of diversity, including student, faculty, and administrative composition, a more inclusive curriculum, and structured and continuing dialogue across racial and ethnic lines.

We hope that the research presented in this book serve to increase the sophistication with which society addresses the key issues of fairness, merit, and benefits of diversity as they pertain to higher education.

This book was prepared with funding support from the American Educational Research Association and the Center for Comparative Studies in Race and Ethnicity (CSRE) at Stanford University. We are especially grateful to James Banks, who initiated this project during his tenure as President of AERA. We also thank Albert Camarillo, Director of CSRE, who encouraged this project and provided supplemental funding.

Chapter 1

Introduction

The chapters in this book are organized to address the three major prongs of the diversity debate in higher education: fairness, merit, and benefits of diversity. We address these issues in the following way:

Fairness

Affirmative action policies are often criticized as being unfair because they give advantages to *individuals* based on *group* membership. Fairness arguments are examined through both empirical and theoretical evidence of persisting inequalities in opportunity and access for different racial groups. In an effort to dispel the common notion that only colorblindness will achieve true equality, the chapters also look at the extent to which racism in various forms is still prevalent among individuals and institutions in the United States, and at how race-conscious policies address racial disparities more effectively than race-neutral ones.

Merit

In order to enhance our discussion of fairness, this book explores the need for a broader definition of merit that moves beyond using only students' test scores and grades as indicators of their capacity for academic success, to looking at broader qualities of leadership, perseverance, and citizenship. Limitations of current measures of merit are analyzed and explained, and a more inclusive definition of merit is presented.

Benefits.

Another aspect of the diversity debate that has been less examined than issues of fairness is an identification of the benefits of diversity programs in higher education. This book pulls together tangible, empirical evidence on the benefits that diversity (in all its multiple forms and dimensions) brings to the individual, the institution and the broader society.

We also address certain commonly accepted misconceptions about racial dynamics in higher education. In the broader society, these misconceptions create powerful attitudinal barriers to embracing the benefits and fairness arguments of the diversity debate, and prevent acceptance of a more inclusive and accurate definition of merit. Despite their lack of substantiation, these popular misconceptions have formed the basis for policies that address racial dynamics in the universities and in the broader society. The topics for each of the chapters were chosen and developed with these misconceptions in mind. Accordingly, each chapter of this volume will be discussed below in relation to the misconception that it addresses.

*Misconception 1***Past inequalities in access and opportunities that racial and ethnic minority groups have suffered have been sufficiently addressed and no longer require attention.**

William Trent, Professor of Education at the University of Illinois, Champaign-Urbana, in his chapter titled “Justice, Equality of Educational Opportunity, and Affirmative Action,” places affirmative action policies in an historical context by examining past and current inequities in access and opportunities for different racial and ethnic groups. Using a social indicators approach and the metaphor of the education pipeline, the chapter examines this evidence in the areas of K-12 schooling, employment, and access to higher education. The evidence presented by Trent pointedly addresses the fact that race is and always has been one of the most important and salient markers of opportunity. Therefore, to disregard race or to develop a colorblind approach to societal interpretation is to disregard the reality that race plays an important role in determining social distinctions. The social psychological theories of fairness put forth in a subsequent chapter (by Shana Levin) build upon the documentation described in this chapter.

Using recent empirical findings, Trent clarifies the persisting importance of attending to present racial inequalities in access and opportunities. He argues that low-income and minority children in the United States have significantly poorer access to quality schooling experiences. As history has demonstrated, aggressive anti-discrimination and desegregation policies alone cannot create equal opportunity for all racial and ethnic groups. Although there are many poor white and Asian students, Trent contends that children who live and attend schools in *concentrated* pockets of poverty are almost exclusively Black, Hispanic, and Native American. Schools that are populated by almost exclusively low-income children tend to have fewer resources, less-prepared teachers, fewer college-preparation courses, and other conditions that negatively affect student learning than do schools populated by students with a diversity of income levels. Evidently, those students who attend desegregated schools do not necessarily fair better. Recent studies have demonstrated that ability grouping and tracking practices result in the disproportionate (and often inappropriate) placement of racial and ethnic minority students in the lowest groups. These long-standing practices have had a significantly negative effect on these students’ opportunity to learn.

According to Trent, interventions at the national, state, and campus levels that address under-representation and success of minority groups in higher education have made some progress on improving access and retention of minority students, but much remains to be done. Contrary to popular perception, interventions such as Head Start, the TRIO programs, and campus-based support service programs for low-income and minority students, are neither massive nor ubiquitous. Therefore, it is unrealistic to rely on these programs alone to remedy the racial and ethnic inequalities in access and opportunity that persist in this country. Trent adds that whites as a group have historically been afforded many privileges, ranging from explicit affirmative action to informal networks, through which many opportunities are gained. These often unacknowledged privileges, many of which persist today, have resulted in great disadvantages to many minority groups. Given the evidence reviewed, Trent concludes that group membership characteristics, particularly race, continue to determine an individual’s experiences and

access to opportunities in many ways that have important consequences for academic performance.

Misconception 2

Merit can be defined by test scores.

Linda Wightman, Professor of Education at the University of North Carolina, Greensboro, in her chapter titled “Standardized Testing and Equal Access: A Tutorial,” looks at the history of standardized test use and the evolution of tests as the principal screening device in determining admission to higher education. According to Wightman, arguments against affirmative action and other race-conscious policies that are intended to diversify university campuses, are often predicated on the common public notion that there are ways of measuring merit that are fairly precise and scientific, and that departure from using these tests inevitably results in unfair discrimination against someone who is more deserving. Wightman contends that the tests are far from being infallible and comprehensive measures of merit. While these tests are shown to be statistically sound, policies based on such a narrow definition of merit inevitably exclude students whose qualifications are not consonant with this definition. These policies also create a more homogeneous student body who will be unable to profit from the knowledge and perspectives that a diversity of experiences and backgrounds affords.

Wightman carefully supports her claims by citing key pieces of evidence and by noting relevant fallacies about standardized tests. For example, she shows that the correlation of standardized test scores with first year college grades is at best modest, and argues that the factors which determine merit and capacity for success—a mixture of ability, talent, and motivation—are not measured by standardized tests. Although flagrant item bias and insensitivity problems of individual test questions have mostly been eradicated in the past decade, Wightman demonstrates that differential predictive validity of tests exists among different racial and ethnic groups. The differences in the performance of black and white test takers are a magnitude of approximately one standard deviation in each of the admission testing programs. According to her, much of this significant difference in performance can be attributed to environmental and societal factors that neither reflect an individual’s level of achievement nor his/her capacity to achieve if given the opportunity. While the cause of this differential predictive validity between racial groups is unknown, its well documented existence puts in question the sensibility of uniformly considering the test scores of all applicants.

Wightman argues that the misuse of test scores for purposes beyond which they have been validated have had a systematic adverse impact on minority applicants to higher education. Data from various studies suggest that basing admissions decisions entirely on test scores and grade point averages would substantially reduce the proportion of admitted applicants from select minority groups. More importantly, most minority students who would have been denied admission (if decisions were based solely on numerical indicators) succeeded when they were given an opportunity to participate.

Misconception 3

Fairness is best achieved through race-neutral policy.

The chapter, “Social Psychological Evidence on Race and Racism,” by Shana Levin, Assistant Professor of Psychology at Claremont McKenna College, leads to one of the central tenets of this volume, namely that racism (whether intentional or not) exists and has always existed in this country on an individual, institutional, and societal level. Therefore, proxies for race continually fail to address current disparities that were historically created by race and racial practices. According to Levin, the two sides of the “fairness” debate can be characterized in terms of the “individual perspective” and the “group perspective.” The individual perspective proposes that all individuals, regardless of race, should be judged on the same established criteria of competence, which are considered objective. According to the group perspective, however, using the same standards to judge individuals from majority and minority groups is unfair because differences in power prevent the two groups from having equal opportunity. Levin critiques these two perspectives by drawing largely from the social psychology literature.

The evidence presented in this chapter supports Justice Blackmun’s opinion in the 1979 Bakke case: “In order to get beyond racism, we must first take account of race. There is no other way...In order to treat persons equally, we must treat them differently” (Regents of the University of California vs. Bakke 1978, p. 2806-2808). Despite the decline of blatant racism and most whites’ ostensible acceptance of racial equality and integration, Levin submits a substantial body of evidence demonstrating that subtle and unconscious racial biases still persist with grave consequences for intergroup relations. Moreover, research consistently demonstrates that race influences social perceptions, attitudes, and behaviors in ways that disadvantage members of minority groups. Levin shows that evidence of institutional racism has been found in several different domains, including the criminal justice system, banking industry (e.g. housing loans), employment sector, educational system, and the media. Among other things, this body of empirical evidence suggest that racial inequalities are not reducible to class inequalities; disparities in racial outcomes persist even when differences in socioeconomic standing are taken into account.

Thus, given present racial circumstances and the existing inequalities in educational access and opportunity (as documented in Trent’s chapter), Levin concludes that “colorblindness” will most likely preserve the racial status quo rather than improve it. The negative effects on minorities that are manifested through subtle and unconscious racial biases, Levin contends, cannot be eradicated by mere race-neutral policies. Instead, race-conscious policies such as affirmative action are needed to bring about true equal opportunity.

Misconception 4

Diversity programs benefit only students of color.

In the chapter entitled, “The Educational Benefits of Diversity: Evidence from Multiple Sectors,” Jeff Milem, Assistant Professor of Education at the University of Maryland, addresses the statement put forth by Justice Powell in the Bakke decision, namely that a race-conscious policy is justified if it serves a “compelling goal.” Milem examines a broad literature base on diversity to address Powell’s legal opinion. The framework for Milem’s discussion centers on examining the benefits of diversity at the levels of the individual, the institution, and society. Not only does Milem’s examination support Powell’s opinion, but he also illustrates how research from a variety of disciplines

and perspectives that document the value of diversity can be used to enhance educational policy and practice in institutions of higher education.

Milem cites numerous empirical findings to highlight the benefits that a diverse student body brings to the entire university community and to the community beyond the university walls. For example, he cites studies which have shown that cross-racial interaction increases students' acceptance of people from other cultures, their participation in community service activities and in other areas of civic participation, retention rates, overall satisfaction with college, intellectual and social self concepts, and their commitment to the goal of racial understanding. Moreover, the greater representation of women and people of color in the faculty ranks has been shown to directly and indirectly shape the organizational climates of the institutions in which these faculty members are working. According to Milem, women faculty and faculty of color are more likely to use student-centered approaches and active learning methods in the classroom, to include the perspectives of racial and ethnic minorities in the curriculum, and to be more actively engaged in conducting research on issues of race and gender. Such student-oriented university climates, more than almost any other environmental variable, have been found to produce more positive student outcomes.

The benefits of diversity have also been documented in other educational settings. The literature on the effects of school desegregation in grades K-12 cited by Milem shows that participation in integrated school settings at a young age has a lasting impact that leads to later desegregation in college, social settings and careers. Among white adults who attended desegregated schools, desegregation has been found to reduce racial stereotyping and diminish fears of hostile interactions in interracial settings. Conversely, segregated schooling has been found to perpetuate itself among both whites and blacks in college and the work environment.

The positive effects of diversity extend beyond education. Research done on diversity in the employment sector shows that effective utilization of diversity (gender, race, and age) enhances organizational performance by 1) attracting and attaining the best available talent, 2) strengthening marketing efforts, 3) bolstering creativity and innovation, 4) improving problem solving capacity, and 5) enhancing organizational flexibility. This and other evidence, Milem adds, also indicates that diverse work teams promote creativity and innovation because of the great variation that exists in attitudes, beliefs, and cognitive functioning among people of different races, genders and ages. Milem maintains that there is also extensive evidence that points to the fact that minority physicians of all subspecialties are significantly more likely than non-minority physicians to practice in under-served areas and to treat Medicaid patients. The increase in the number of minority physicians that occurred with the advent of affirmative action programs in medical schools has, therefore, substantially improved minority populations' access to health care.

The documented benefits of diversity raise serious concerns about the broader purpose of higher education. The more traditional view of the role of the university is to enable participants to preserve, transmit and discover knowledge. If this knowledge is considered to be static and absolute, then diversity among the students to whom it is transmitted is unimportant. However, if the goal of transmitting this knowledge is perceived to be the creation and relevance of new knowledge, then diversity takes on new significance. In determining their diversity policies, both universities and the communities into which they send their students, must grapple with the following questions: To what extent can students receive a meaningful education that prepares them to participate in an

increasingly diverse society if the student body and faculty are not diverse? To what extent will universities be able to address the issues that are central to diverse societies if they do not have adequate representation of that diversity?

Conclusion

Policy discussions about diversity and race-conscious practices are typically clouded by misconceptions that are not substantiated by empirical evidence but are instead politically and emotionally driven. Although the evidence in this area is still emerging, there are many lessons to be learned from social science research that have powerful implications for diversity policies in higher education. The review of the research in this volume, conducted and deliberated by expert scholars, leads to the following compelling conclusions: (1) there is clear evidence of continuing inequities in educational opportunity along racial categories; (2) test-based definitions of merit are incomplete; (3) race is a major social psychological factor in the American consciousness behaviors; and (4) racially diversified environments, when properly utilized, lead to quantitative as well as qualitative (otherwise unattainable in homogeneous environments) improvements in educational outcomes for all parties.

Several major policy implications corresponding to these conclusions are also offered in this volume. First, interventions that specifically address past and current effects of racial discrimination are still needed to achieve equality of opportunity for all. Second, university admissions must operate under an inclusive definition of merit that takes into account the relative intellectual and civic contributions an applicant will make to the university and the broader community, and that accurately reflects the detrimental effects of social and environmental factors on the test performance of racial and ethnic groups who continue to be targets of discrimination. Third, in order to be truly equitable and effective, admissions and campus diversity policies should not only consider the individual, but also reflect the salience and negative consequences of race in American society. For example, recognizing group membership as well as individual merit in the selection process will enhance perceptions of fairness and reduce ambiguity about the extent to which selection was deserved. Lastly, colleges and universities that seek to realize the benefits of diversity for all members of the university community and of the broader society must maximize and integrate all dimensions of diversity, including student, faculty, and administrative composition, a more inclusive curriculum, and structured and continuing dialogue across racial and ethnic lines, to name a few.

Although we are generally optimistic about the potential for higher education to play a central role in improving the racial circumstances in this country, we also believe that many colleges and universities do not maximize the educational opportunities before them. For example, many institutions fail to provide undergraduates with the critical experiences necessary to discuss constructively and to critically understand their racial experiences and perceptions. Moreover, the academy has generally been surprisingly silent in the court battles and national dialogues regarding affirmative action that are taking place across the country. This volume makes a compelling argument for why institutions of higher learning need to focus on issues of racial dynamics, to establish a blueprint for research on what we still need to know, and to suggest techniques and tools for institutions to maximize the opportunities that diversity presents. Clearly, the energy and work required to bring about widespread educational benefits not only have a high rate of return, but are necessary for truly creating equal opportunity and for effectively educating students to live in the 21st century.

Chapter 2

Justice, Equality of Educational Opportunity and Affirmative Action in Higher Education

by William Trent, Dawn Owens-Nicholson, Timothy K. Eatman,
Marya Burke, Jamie Daugherty, and Kathy Norman
University of Illinois, Champaign-Urbana

“In order to get beyond racism, we must first take account of race. There is no other way.”

-- Justice Harry Blackmun in *Bakke*.

The current debate regarding the use of race in higher education admissions decisions, in selection for other campus programs designed to address underrepresentation, and/or to achieve a more diverse university community, continues in sharp contrast to Justice Blackmun's 1978 admonition. While perhaps not sufficiently explicating the way(s) to take account of race, the substance of Blackmun's 1978 statement is largely consistent with the prior thirty-five years of public policy in education dating back to *BROWN*. Indeed, following *BAKKE*, taking account of race in order to achieve equitable representation in the workplace and in education persisted, slowly and deliberately, but persisted nonetheless (Mills, 1994).

The use of race as a factor to remedy past and current discrimination has continued but this use is distinct from the use of race to address 'diversity', representation, inclusivity or equity. Critics of affirmative action argue that the latter use is based on an 'equality of results orientation which is sharply different from an 'equality of opportunity' orientation. The discussion of results versus opportunity orientations continues in the policy and academic communities and it apparently turns, in part, on the distinction between a consensus about the just remedying of de jure discrimination and its vestiges as contrasted with the goal of achieving parity as remedy. In many respects, the distinction in higher

education, between those colleges and universities in the South where segregation was legally enforced and those colleges and universities outside the South, is a distinction without a difference (Ballard, 1973; Cobb, 1998). Simply put, examination of the long-term record of black participation in higher education in the US shows that the vast majority of all of higher education could be described as denying access to Blacks. In effect custom was virtually as powerful as law.

The decisions in *HOPWOOD* and *WESSMAN*, along with the Constitutional provisions of Proposition 209 in California and Initiative 200 in Washington, reflect the ascendancy of a policy perspective that would severely limit the role of race in public policy and especially in educational policy and practice. In higher education, the spread of this more limiting public policy perspective threatens to dismantle over a quarter century of targeted assistance to groups historically denied full participation and access largely on the basis of race. It is tragic irony that the civil rights movement that sought to help us get beyond race is now challenged by the potential of not being able to take account of race. Critics of affirmative action are even citing the fervent words of Dr. Martin Luther King's "I Have A Dream" speech that "one day men will be judged by the content of their character rather than by the color of their skin" in their efforts to limit the use of race in constructing remedy and redress. The moral appeal of this colorblind conception underestimates the pervasiveness of the cumulative effects of legal and customary discrimination, especially against blacks and threatens to dismantle substantial progress realized during the post-*BROWN* era.

Much of the current debate proceeds without careful reflection on the very brief period for which we have been pursuing greater participation in higher education for minorities under any policy model. Most have been concerned to show the harmful consequences of the impact of *HOPWOOD* and *Proposition 209*, providing detailed examinations of declines in applications and enrollment; estimates of the actual difference that race makes at selective institutions either at the undergraduate level (Kane, 1998); or in admission to law school (Wightman, 1997). Most recently Bowen and Bok (1998) have provided a major analysis of the matriculation of Blacks at highly selective colleges and universities, which shows important benefits of affirmative admissions policies. In each of the above analyses the authors have focused considerable attention on the admissions process and the importance of the use of race to offset the lower test scores of African Americans and Latino/a applicants. Each study demonstrates the centrality of using race as a factor in securing the admission of these students to selective colleges and universities.

This chapter examines the patterns and trends in participation in higher education by race and sector--Carnegie Classification--for the period 1980 through 1996. We report enrollment, segregation and earned degree patterns for selected years during this period. The chapter addresses the several questions. First, what are the patterns--levels, trends, contrasts--of participation in higher education by race and sector? This question is examined first with respect to enrollment at both the undergraduate and graduate levels and subsequently with respect to earned degrees. Second, using a measure of segregation within each sector, we seek to approximate the amount of diversity that might characterize higher education.

Specifically the chapter explores enrollment, segregation and degree completion for each of four sectors, defined by Carnegie¹ category, of higher education. The intent is to better understand relative participation levels and differences in and across sectors by

race. The use of race as factor in admissions obviously impacts members of each underrepresented group including African Americans, Hispanic, Native American, and Asians. While we address important differences, the principle focus is on African Americans as a consequence of the history of legalized discrimination against this group that has resulted in barriers that distinguish them in important ways.

Setting the Context

The current higher education context is different in multiple and complex ways from the context in 1965 when the higher education act of that year was passed. In that initial authorizing legislation, major initiatives, especially those most closely identified with access to and participation in higher education were set forth. The Trio programs, Upward Bound Talent Search and Special Services and the Basic Educational Opportunity Grants (BEOG, now PELL grants), all came to fruition during the period 1965 to 1969. Each had as a core part of its origin, a fundamental understanding that race and poverty were critical factors to take account of in increasing access to higher education.

Evidence of the condition of Black participation in higher education at that time is illustrated in the 1971 Newman Report on Higher Education. The report shows that from 1964 to 1968, Black enrollment increased 85%, from 234,000 to 435,000. As a percentage of total enrollments, the change was from 5% to 6.4%. In his 1971 report, Secretary of Health Education and Welfare, Elliott Richardson labeled the progress in this area "The Unfinished Experiment of Minorities in Higher Education."

It is also important to note that discussions about race in this period were discussions largely about blacks and whites. The experiment that Richardson referenced was those efforts of traditionally white colleges and universities to increase the presence of Black students at their campuses. The success of these efforts was reported by Crossland (1971) who reported that by 1970, nearly two thirds of all black students were enrolled in other than traditionally black colleges and universities where in 1964 more than half were enrolled in Traditionally Black colleges and universities.

The dominant public policy understanding of affirmative action in the mid-1960s was one of support, growing, in part, out of the leadership of then President Johnson.² In 1967, President Johnson issued Executive Order 11375, which included sex along with race as an illegitimate basis of discrimination. Where in 1967, this was perceived as a necessary way of preventing harm to the legitimate educational aspirations of blacks and women, it has come to represent the views of critics who would dismantle the programs that emerged in response to overcoming barriers.

In some ways the precursor to the public policy opposition to an affirmative use of race today may well have been the "benign neglect"³ statement of the Nixon Presidency. Certainly **Bakke, Weber, Podberesky, Hopwood, Wessman** and the state constitutional amendments in California and Washington are the crystallization of a fundamental contrast to the prevailing views of the past forty years. Where race has traditionally been viewed as a legitimate basis for redress, even under de facto circumstances, it has now come to be painted with the brush of the "victimization hypothesis." This hypothesis argues that incumbents in racial categories use their racial status to make illegitimate claims on scarce resources and opportunities.

Still another argument is that race is no longer the principal factor shaping inequality. This argument reasons that we have managed to transcend race in most ways and that poverty or class⁴ is the main cause of inequality. Wilson's *The Declining*

Significance of Race was widely cited as empirical evidence for this view by the social science and public policy communities. Fordham and Ogbu's (1989) ethnographic work in urban black schools highlighting an oppositional attitude among students who were said to associate academic excellence with 'acting white' has been received as evidence of the values based resistance.

Of course there are many more vital aspects of the context that have changed, not the least of which is the demographic transformation underway in the US. As stated earlier, the debate about race in higher education in the US has been a black-white discussion. That framing of the discussion of race is no longer reasonable. While there are critical reasons that make the situation of blacks very different from that of other communities of color, it nonetheless makes necessary a recognition of common barriers to full participation along with a recognition of differences.

The legacy and stigma of slavery and Jim crow as it impacts African Americans stands in stark contrast to the 'model minority' imagery. The plight of Native Americans is different still given the history of US management of the Bureau of Indian Affairs and Indian education. The diversity within both the Hispanic and Asian categories, along with the language issues raised for each, further complicate any discussion of an effective 'common' response to the removal of the barriers to full and equitable participation in higher education.

Lastly, analysts have pointed to the earlier era as one of heightened expectations and a sense of broad spread prosperity as forming the basis for a more generous consensus about social policies emphasizing access and opportunity. It is safe to say that some of these arguments were offered prior to the most recent upturn in the US economy (Mills, 1994). It seems clear now that not just economic prosperity is sufficient to sustain public policies that foster access and opportunity. At the same time, it also appears that a sense of heightened expectations for unlimited opportunity and growth are necessary for public support of the traditional affirmative strategies. The current press of 'global competition' for available work appears to encourage a 'zero sum game' orientation to opportunity. Under this framework, the public is less generous, fearing a reduction of choice as well as a limitation of the chances for success for their children and themselves.

It is also the case that there is far more intense competition for the public dollar. Healthcare for the elderly, healthcare for the young and indigent, increased incarceration under a get tough mentality and a broad array of infrastructure repair costs each compete with education for support. The programmatic interventions of the past thirty-five years, employing an affirmative use of race, are competing for funding with a set of issues that have very strong advocates. By contrast, education, especially higher education, continues to be viewed as a privilege and there has been a substantial shift to a public sentiment that says that the benefactor has to be willing to cover more of, if not all of, the costs. In addition, those who will be assisted will merit any assistance that is provided. Hence the growth in loan assistance as the principle form of government financial assistance to students in higher education and the growing reliance on tests scores in the admissions process to determine merit.

Merit per se is not being challenged here, but rather a narrowing definition of merit that relies too heavily or nearly entirely on test scores. For those colleges and universities where selection of a student body is the challenge⁵, the pressure to make admissions more objective increases the reliance on tests. Public universities feel this pressure much more intensely.

These attributes of the current context make it more important that we take stock of progress and the lack thereof, in the expansion of participation in higher education for different racial groups in the US.

Data and Methods

This chapter addresses questions about the patterns of participation in higher education by sector and race for selected years. Our intent is to identify the racial differences in levels of participation by sector for each race category and the changes in levels of participation that have occurred for each race category? The data used for the enrollment, segregation and degree attainment examination are from the Integrated Postsecondary Education Data System (IPEDS) for the years 1982, 1988 and 1996 for enrollment and for the years 1980, 1988 and 1994 for degree attainment. The latter years are the most recent years for which the IPEDS data have been completed.⁶

The analysis treats each Carnegie category as a sector of higher education. It has been customary in the current debate to treat colleges and universities as sectors based on their selectivity. This strategy is used by Bowen and Bok, for example, and by Kane. Carnegie categories are based on other criteria that constitute the basis for collections of colleges and universities that share similar/common attributes. They constitute, in substantial ways, the reference categories that the colleges and universities use in setting policies in order to remain on par within their tier or segment, what we here refer to as sector.

It is especially useful for our purposes since within each sector we can identify public and non-public colleges and universities. In the current attack on the use of race in admissions and other selection decisions, it is the public segment of each sector of higher education that is addressed and primarily the Research I Universities: The University of Maryland; The University of Texas at Austin; UCLA and UC Berkeley; The University of Michigan. Sometimes referred to as the flagship universities within their respective states, these campuses are the beneficiaries of intentional state policies that make them especially attractive.

Research I universities are a special resource within the overall framework of higher education. They stand at the top of a hierarchically structured system of American higher education. Their faculties, physical plants, material and intellectual resources distinguish them as a group. They have at the core of their mission both research and teaching and arguably among their critics, research is the driving force of these institutions. Gumpert (1994) writes that:

"While direct support of doctoral education (fellowships and traineeships) was done on a competitive basis, the talent and support ended up being concentrated at leading research universities, where the federally sponsored research was occurring. This resulted in a consolidation of resources for both research and doctoral training, giving these institutions a double competitive edge in attracting high quality students and faculty."

Gumpert concludes that graduate education and research now serves as the primary purpose for those universities in the top tier and as the "noble aim for lower tiers to emulate."

In the late 1960's and early part of the 1970's, the efforts of activists targeted these campuses for increased access for minorities in some part because it was reasoned

that the undergraduate environment on these campuses would be more encouraging of aspirations for graduate study for minority students. In short, students attending these universities would be socialized in an environment where the expectation for further study was the norm.

Finally, Research I universities are also a critical resource because of the organizational network they comprise and in which they are embedded. Bowen and Bok (1998) show an aspect of this in their examination of the career results for graduates of the elite colleges and universities in their study. Their evidence is compelling and shows the importance of elite linkages.

The use of the Carnegie classification system thus provides us a vehicle for examining relative participation across sectors with special attention given to research I universities.

Patterns, Trends and Contrasts

Perhaps one of the most enduring metaphors in all of education is that of the "educational pipeline". It seems intended to evoke an image of the passage of students from school entry to school exit as a 'flow' along what might naively be seen as a relatively straight or predictably curving pipe. The difficulty with the metaphor occurs when we try to account for the numbers of students who exit the pipeline in inappropriate places and at inappropriate times. For the most part we tended to view the pipeline as largely intact and accommodating the relatively smooth and uninterrupted flow of the majority of students from school entry to school completion. Inappropriate exits have mainly been explained as individual failure.

Several scholars have challenged this prevailing view by suggesting that we might reject the pipeline metaphor in favor of one that is more consistent with the experiences of Black, Latino, Native American and many poor children. Olivas reasons that thinking of a stream or a river would be more appropriate since there would be a greater possibility of seeing the occurrence of blockages in the rivers or streams which could slow or divert the flow and/or redirect it. For students of color, participation in higher education has been a goal, fraught with barriers, blockages, misperceptions and misconceptions, that maps well onto the alternative imagery. This chapter seeks to capture both the successes and frustrations of the pursuit of that goal by describing the participation of students of color in higher education since 1980, examining both enrollment and degree attainment patterns.

The Early Stages

There is a broad based consensus regarding the critical roles the early years of childhood and schooling play in shaping long term educational achievements. There is at the same time, a continuing and growing chorus that points to family background and, family structure in particular, to account for poor school performance and low levels of achievement in African American and Hispanic communities. Coleman and others (1965) provided the initial empirical evidence for this latter argument when the Equality of Educational Opportunity Survey failed to confirm the conventional wisdom that school-to-school differences in quality of educational resources were the primary cause of differences in educational attainment between rich and poor, and minority and white communities. This debate regarding family background and structure versus discriminatory practices in k-12 schooling fuels a tension over policy choices that are too often discussed in either or terms rather than "both and." The perspective employed in the discussion below centers on "opportunity to learn" and examines factors that shape such

opportunities. Clearly, family resources, including parental education and family stability are important opportunity-to-learn conditioners. In this section we briefly discuss particular features of the early stages of the educational pipeline that have been shown to influence educational attainment. This is a necessary discussion prior to the discussion of higher education patterns and trends. Specifically, we present data on early-childhood education, children at risk, the changing demographics of the schools, average reading proficiency, racial-ethnic and SES composition of school districts by district size and tracking and ability grouping.

We begin by first discussing the demographic realities of the nations public elementary and secondary schools. Hodgkinson (1986) described the demographic imperative, the forces of population growth and change that yield our school population, and its implication for education. As the nation's population was becoming increasingly minority, the rate of change in the school population was even greater. More importantly, the demographic shifts are such that the schools are getting greater numbers of students for whom school has not been a successful experience. There are greater numbers of economically disadvantaged students, greater numbers of students for whom English is a second language, and greater numbers of students from single-headed households. Table 1 presents the percentage distribution of enrollment by race in the elementary and secondary schools for selected years from 1976 through 1995. There has been an 11% increase in minority students during this period. The percentage of Hispanic students has more than doubled, from 6.4 5 in 1976 to 13.5% in 1995. The percentage of Asian/Pacific Island students has tripled, increasing from 1.25 to 3.7%. What these statistics do not show is the great variability within both the Hispanic and Asian categories. The variations include language, cultural and political differences that impact access and opportunity.

The discussion which follows is limited by our inability to identify the more detailed categories within which students fall. Nonetheless, the broad categories that are used are themselves very illustrative of race and ethnic differences in opportunity to learn and in performance.

Early Intervention

Research encompassing the need for intervention as early as the age of three years (Children's Defense Fund, 1996) and the benefits of pre-school, especially for poor and minority youngsters, has alerted the policy community to the need to redouble efforts focused on the early years. School readiness and the beginning of the schooling experience is greatly influenced by the early training and exposure that families and communities can provide. Early intervention provides a mechanism for counteracting the limitations of economically disadvantaged communities and helping students have a more equal starting point. Such opportunities are not evenly distributed across race and income categories. Table 2 shows the prekindergarten participation rates of 3 to 4 year olds by family income and race and ethnicity.

The data are from the 1990 census and they show that generally, irrespective of race, participation in prekindergarten is greater for those families with higher incomes. Hispanic participation rates are lower at each income level. White and Asian participation rates are highest among the high-income groups. One of the key policy strategies for improving the number of students of all race-ethnic categories who perform better early on in school will be the ability to overcome the financial constraints that limit early participation. Research on the National Assessment of Educational Progress, NAEP, shows that the gap in minority-white scores at age 17 is about the size of the gap at age 9.

Table 1**Percentage distribution of enrollment in public elementary and secondary schools by race/ethnicity: 1976-95**

Race/ethnicity	1976	1984	1986	1988	1990	1992*	1993*	1994*	1995*	1976-95 Change in Percentage Points
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	--
White, non-Hispanic	76.0	71.2	70.4	70.7	67.8	66.7	66.1	65.6	64.8	-11.2
Total minority	24.0	28.8	29.6	29.3	32.1	33.3	34.0	34.4	35.1	11.1
Black, non-Hispanic	15.5	16.2	16.1	15.2	16.2	16.5	16.6	16.7	16.8	1.3
Hispanic	6.4	9.1	9.9	10.1	11.5	12.3	12.7	13.0	13.5	7.1
Asian/Pacific Islander	1.2	2.5	2.8	3.1	3.4	3.5	3.6	3.6	3.7	2.5
American Indian/Alaskan Native	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.1	0.3

Data are from the Common Core of Data (CCD) Survey.

SOURCE: U.S. Department of Education, Office for Civil Rights, Elementary and Secondary School Civil Rights Survey,

1976, 1984, 1988, and 1990;

National Center for Education Statistics, Common Core of Data Survey, 1992; and *Digest of Education Statistics, 1995, 1996, and 1997.*

Table 2. Prekindergarten participation rates of 3 to 4 year olds by family income and race and ethnicity: 1990:

	White	Black	Hispanic	Asian/Pacific Islander	American Indian/Alask an Native
Family Income					
\$100,000 or more	59.7	49.7	3.6	53.0	51.2
\$75,000 - \$99,999	50.9	45.9	34.9	44.8	37.2
\$50,000 - \$74,999	44.5	42.5	28.6	40.2	35.8
\$35,000 - \$49,999	35.8	36.2	23.8	33.5	29.5
\$25,000 - \$34,999	28.5	32.6	19.5	26.6	29.0
\$15,000 - \$24,999	23.4	29.0	17.0	22.5	26.5
\$10,000 - \$14,999	22.3	27.8	16.7	22.1	28.9
\$5,000 - \$9,999	23.4	26.8	17.5	22.1	28.3
Less than \$5,000	22.6	24.1	16.9	21.8	25.0

SOURCE: U.S. Bureau of the Census, *1990 Decennial Census School District Special Tabulation*. SDAB tabulation reference RQ2H10R

Early intervention may substantially reduce the size of the early gap and thereby preserve later school opportunity and performance.

A number of factors conspire to place students at risk of educational failure. Among these are poverty, being in a single-female-headed household, residing in an urban area and attending an urban school. As the tables below show, the likelihood of experiencing each of these differs by race. Table 3 [not available in this draft] presents the distribution of students at risk, both the count and the percentage. The statistics are for children between 0 and 19 years of age for 1990. Nearly half, 44%, of the children identified as at risk are African American. By contrast, only one percent are Asian. Roughly the same percentage of children at risk are Latino, 26%, and white, 27%. Students at risk are more likely to drop out of school and more likely to experience poor academic performance. Each of these outcomes dramatically reduces the numbers available for graduation and college enrollment.

One indicator of low academic performance, arguably the essential component of intellectual development, is reading proficiency. Table 4 [not available in this draft] presents the average NAEP reading proficiency scores for students ages 9, 13 and 17 by race and ethnicity for selected years from 1971 to 1996. Black and Hispanic average reading proficiency scores are substantially below those of whites at each age and for each year. The gap has however narrowed slightly between Blacks and Whites and Hispanics and Whites during this 25 year period.

Student performance in schools is shaped by a variety of factors. Research has shown that the concentration of poverty in schools and the concentration of African American and Hispanic students in schools are both highly correlated—they tend to occur together. The schools in which these two factors occur together are typically in large, urban districts. The schools in which these two factors typically occur are almost always more poorly resourced as measured by pupil-teacher ratios, teachers with advanced credentials, more experienced teachers, or an enriched curricula. Massey and Denton (1993), in their examination of racial segregation, describe the phenomenon of hypersegregation which has high segregation on several ascriptive factors, race, ethnicity and income in particular. The authors show the implications of intense race and poverty segregation for educational outcomes. In their simulations Massey and Denton are able to manipulate average school test scores by varying the levels of racial and poverty concentration. In general, the greater the intensity of the two the lower the average test scores.

Table 5 shows the Racial-Ethnic composition of regular school districts by district size. The data are for school years 1987-88 through 1990-91. Table 6 gives the racial-ethnic composition for regular school districts by poverty level. The two tables together provide clear evidence that the largest school districts and the districts with the greatest concentration of poverty are substantially minority. In Table 5, the largest districts, 10,000 and over, were about 47% minority in 1990-91. Forty-one percent of the enrollment in districts this size was Black and Hispanic. This is in contrast to an overall average of about 32% minority students in all schools for that year. By contrast, in smaller districts, 1000 to 5000, the percent minority was about 17.5 for 1990-91. Only 12.5% of the enrollment in Districts this size was African American and Hispanic.

Table 6 shows an even more dramatic difference across school districts differing by levels of poverty concentration. In districts where the percentage of school children in poverty was 25% or more, the percent of minority students was 61 percent in 1990-91. Black and Hispanic enrollment averaged just over 56 percent. By contrast, in low poverty

Table 5.**Racial-ethnic composition of regular districts, by district size: 1987-88 to 1990-91**

	Number of Students	Percent Native American	Percent Asian	Percent Hispanic	Percent Black	Percent White
Overall						
1987-88	39,963,281	1.0	3.0	10.2	16.5	69.3
1988-89	40,120,672	1.0	3.1	10.7	16.4	68.8
1989-90	40,408,326	1.0	3.2	11.2	16.3	68.4
1990-91	40,911,261	1.0	3.3	11.6	16.2	67.9
Size						
0 -999						
1987-88	2,975,906	2.9	0.9	5.4	3.7	87.2
1988-89	2,974,605	2.9	0.8	5.4	3.8	87.0
1989-90	2,927,104	2.9	0.8	5.5	3.5	87.3
1990-91	2,917,080	3.0	0.8	5.5	3.3	87.5
1,000 - 4,999						
1987-88	12,539,341	1.1	1.4	5.2	9.3	82.9
1988-89	12,513,543	1.1	1.5	5.5	9.4	82.6
1989-90	12,544,546	1.1	1.5	5.7	9.3	82.4
1990-91	12,523,715	1.1	1.5	5.8	9.1	82.4
5,000 - 9,999						
1987-88	6,533,712	0.7	2.6	7.9	12.8	75.9
1988-89	6,433,060	0.7	2.7	8.2	12.9	75.6
1989-90	6,422,276	0.7	2.8	8.8	12.7	75.0
1990-91	6,477,862	0.8	3.0	9.2	12.8	74.3
10,000 and over						
1987-88	17,914,312	0.6	4.7	15.4	25.0	54.3
1988-89	18,199,464	0.6	4.8	16.0	24.6	54.0
1989-90	18,514,400	0.7	4.9	16.6	24.3	53.5
1990-91	18,992,604	0.7	5.0	17.2	24.0	53.2

NOTE: Percentages may not add to 100 percent due to rounding

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys

1986-87 to 1990-91.

Table 6.**Racial-ethnic composition of regular districts, by SES (percentage of population in poverty):
1987-88 to 1990-91**

	Number of Students in Analysis	Percent Native American	Percent Asian	Percent Hispanic	Percent Black	Percent White
Overall						
1987-88	39,963,281	1.0	3.0	10.2	16.5	69.3
1988-89	40,120,672	1.0	3.1	10.7	16.4	68.8
1989-90	40,408,326	1.0	12	11.2	16.3	68.4
1990-91	40,911,261	1.0	3.3	11.6	16.2	67.9
Percentage of school-age children in poverty: 1990						
< 5%						
1987-88	4,243,231	0.3	3.6	4.2	3.7	88.2
1988-89	4,300,465	0.3	3.8	4.4	3.8	87.8
1989-90	4,349,079	0.3	4.0	4.7	3.9	87.1
1990-91	4,427,781	0.3	4.2	4.9	3.8	86.8
5% - < 15%						
1987-88	13,645,900	0.7	2.6	5.4	7.4	83.9
1988-89	13,797,186	0.7	2.7	5.7	7.5	83.4
1989-90	13,998,850	0.7	2.8	6.1	7.5	82.8
1990-91	14,269,556	0.7	3.0	6.5	7.6	82.2
15% - < 25%						
1987-88	10,932,698	1.0	3.5	8.8	14.2	72.4
1988-89	11,025,089	1.0	3.6	9.4	14.4	71.7
1989-90	11,144,517	1.0	3.6	10.0	14.3	71.1
1990-91	11,322,823	1.0	3.7	10.5	14.4	70.4
25% and over						
1987-88	10,984,196	1.5	2.9	20.0	35.2	40.4
1988-89	10,954,566	1.5	2.9	20.6	34.7	40.2
1989-90	10,915,880	1.6	3.0	21.5	34.5	39.5
1990-91	10,878,202	1.6	3.0	22.1	34.4	38.9

Only districts for which SES data were available are included in these analyses.

NOTE: Percentages may not add to 100 percent due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys

1986-87 to 1990-91

U.S. Department of Education, National Center for Education Statistics, School District Data Book

Version 1.0, June

1994.

Racial-ethnic composition of schools in regular districts, by type: 1987-88 to 1990-91

	Number of Students	Percent Native American	Percent Asian	Percent Hispanic	Percent Black	Percent White
Overall						
1987-88	39,963,281	1.0	3.0	10.2	16.5	69.3
1988-89	40,120,672	1.0	3.1	10.7	16.4	68.8
1989-90	40,408,326	1.0	3.2	11.2	16.3	68.4
1990-91	40,911,261	1.0	3.3	11.6	16.2	67.9
Type						
Regular School						
1987-88	39,580,239	1.0	3.0	10.2	16.4	69.4
1988-89	39,764,178	1.0	3.1	10.6	16.3	69.0
1989-90	39,973,930	1.0	3.2	11.1	16.1	68.5
1990-91	40,516,673	1.0	3.3	11.6	16.1	68.1
Special Education School						
1987-88	155,987	0.5	2.7	17.2	28.1	51.5
1988-89	158,960	0.7	2.7	17.2	27.5	51.9
1989-90	153,918	0.8	2.6	17.3	27.4	51.9
1990-91	165,165	0.8	2.6	16.7	28.9	50.9
Vocational Education School						
1987-88	128,341	0.3	1.8	14.7	40.0	43.2
1988-89	123,620	0.4	1.6	13.2	32.3	52.5
1989-90	138,654	0.5	2.4	13.6	37.7	45.7
1990-91	114,779	0.6	2.1	14.9	33.7	48.8
Alternative Education School						
1987-88	98,714	2.3	2.7	9.2	21.9	63.8
1988-89	73,914	2.8	1.8	9.1	18.3	67.9
1989-90	141,824	2.9	2.6	11.5	25.2	58.7
1990-91	114,644	2.3	2.0	9.2	24.4	62.0

NOTE: Percentages may not add to 100 percent due to rounding

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys
1986-87 to 1990-91.

Racial-ethnic composition of regular districts, by district size: 1987-88 to 1990-91

	Number of Students	Percent Native American	Percent Asian	Percent Hispanic	Percent Black	Percent White
Overall						
1987-88	39,963,281	1.0	3.0	10.2	16.5	69.3
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1990-91	40,911,261	1.0	3.3	11.6	16.2	67.9
Size						
0 -999						
1987-88	2,975,906	2.9	0.9	5.4	3.7	87.2
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1989-90	2,927,104	2.9	0.8	5.5	3.5	87.3
1990-91	2,917,080	3.0	0.8	5.5	3.3	87.5
1,000 - 4,999						
1987-88	12,539,341	1.1	1.4	5.2	9.3	82.9
1988-89	12,513,543	1.1	1.5	5.5	9.4	82.6
1989-90	12,544,546	1.1	1.5	5.7	9.3	82.4
1990-91	12,523,715	1.1	1.5	5.8	9.1	82.4
5,000 - 9,999						
1987-88	6,533,712	0.7	2.6	7.9	12.8	75.9
1988-89	6,433,060	0.7	2.7	8.2	12.9	75.6
1989-90	6,422,276	0.7	2.8	8.8	12.7	75.0
1990-91	6,477,862	0.8	3.0	9.2	12.8	74.3
10,000 and over						
1987-88	17,914,312	0.6	4.7	15.4	25.0	54.3
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1989-90	18,514,400	0.7	4.9	16.6	24.3	53.5
1990-91	18,992,604	0.7	5.0	17.2	24.0	53.2

NOTE: Percentages may not add to 100 percent due to rounding

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Surveys
1986-87 to 1990-91.

districts, the minority percentage was 13.5% and Blacks and Hispanics together averaged just 8.9%.

One more example shows the extent to which different race-ethnic groups experience very different school contexts. As part of an expert report on the consequences of school desegregation, data from two national surveys were examined in order to test the consistency of findings regarding the benefits of desegregation. The surveys were the National Longitudinal Labor force Study-Youth Cohort (ne Parnes) and High School and Beyond (HS&B). Students in Parnes were high school seniors in 1978 while the high schools in the HS&B were surveyed in 1980. Table 7 [not available in this draft] is taken from that report. The table presents the school averages for five school attributes; percent of students classified as disadvantaged; school percent Latino/a; school percent African American; school dropouts, and; college attendance rate. These data make clear the high concentrations of disadvantaged students, the high concentrations of other minority students and the somewhat higher likelihood of dropping out in schools attended by minority students.

We also see in these data that there are real differences within the Hispanic category. Except for having a higher concentration of other Latinos in their schools, Cubans attended schools very much like the schools attended by whites in these data. By contrast, Blacks and Puerto Ricans have a higher likelihood of being in schools where the concentration of other minorities and the concentration of disadvantaged students are higher. Cubans were also shown to be attending high schools where the reported college going rate, 67%, was significantly higher than is the rate for any other race/ethnic group. Conversely, Blacks and Mexican Americans were attending schools with the lowest rate, 45.3% compared to all other groups.

The preceding discussion focuses primarily on examples emphasizing the educational disadvantages that result from poverty and high levels of racial segregation. These contextual factors have been shown to impact opportunity to learn by limiting the educational resources in these environments. In addition to these contextual factors, a variety of school related practices have been shown to negatively impact opportunity to learn. Chief among these has been the use of ability grouping and tracking in schools.

A substantial body of research has shown how grouping practices have been used in ways that reassembles students along social class and race lines with the disproportionate higher concentrations of poor and minority youngsters in the lower ability groups (Slavin, 1989; Oakes, 1985). These studies report that the quality of instruction in the lower groups works to disadvantage students in these groups in a cumulative way. In other words, students in these groups learn less as a consequence of group membership and that this deficit is cumulative as the placement continues. In this manner, poor and minority students become increasingly less competitive in the classroom.

Tracking, the process of assigning students to academic tracks or streams as early as the middle school years, based on prior academic performance and measured ability, magnifies and compounds the effects of ability grouping in classrooms and grades in the earlier grades. First, decisions about track placement are based on a combination of test scores, grades and recommendations. Students who have been receiving lesser quality instruction cannot compete well on these criteria and are seldom selected into the more challenging academic tracks, thereby magnifying the effects of earlier ability grouping. This is then compounded when, in the lower tracks, students receive a further comparative disadvantage by being placed--locked--in a less rigorous curriculum. Heyns (1974) research, employing a status attainment approach, showed how tracking actually

Table 7.

From High School and Beyond Base Year School Data File

High School % Black	Average % 1979 Grads Attending “Regular” College in 1980	Unweighted N	Weighted N	High School % Minority	Average % 1979 Grads Attending “Regular” College in 1980	Unweighted N	Weighted N
0-9%	46.2736	597	14,595	0-9%	46.5026	425	12,067
10-24%	43.0249	130	1,716	10-24%	41.5993	151	2,867
25-49%	44.0342	110	1,433	25-49%	47.9709	151	2,199
50-74%	34.2926	41	521	50-74%	39.1008	84	657
75-100%	35.1982	52	755	75-100%	36.9658	130	1,370

From National Education Longitudinal Study of 1988 First Follow-up School Questionnaire

10th Grade % Black	Average % 1989 Grads Attending a 4-Year College in 1990	Unweighted N	Weighted N	10th Grade % Minority	Average % 1989 Grads Attending a 4-Year College in 1990	Unweighted N	Weighted N
0-9%				0-9%	49.6187	396	
10-24%				10-24%	57.6398	211	
25-49%				25-49%	46.1620	179	
50-74%				50-74%	39.8208	106	
75-100%				75-100%	38.7857	140	

The HSB work was straightforward. There was a separate School data file which contained the necessary variables: HS % Black, % of Grads attending regular college (“Regular” did not specify 2yr or 4yr). HS % Minority was constructed by adding together % American Indian, % Asian, % Hispanic, and % Black. There was a school weight in this file, and the percentages are based upon that weight. The weighted and unweighted n’s are in the table. I chose the percentage categories based upon what was available for the NELS88 (see below).

The NELS work was tricky. First, I had to use the 1st follow-up (when the students were 10th graders) because the base year did not have a College Attendance variable. Second, there is a separate “School” file, but the unit of analysis is still the student, so I had to extract only the first occurrence of each unique school id. Then, although % Black, % Asian, % Hispanic, and % Native American are listed in the codebook, in reality all those fields have missing data. Only the % White, Non-Hispanic field has any data. So I could only construct a % Minority variable, not a % Black variable. (I also checked the CD and it does not have information on separate races either. I also looked at the 2nd followup—same deal.) Thirdly, the HS % Minority represents only 10th graders—the high school total is not in the data. Lastly, the % Minority variable is not continuous (as the HSB’s was)—it was in 5 categories—so I used it as is. Oh, also the college attendance rate represents 4-yr colleges. And there is no school weight variable—since I extracted the data from a student file.

was associated with contributing to inequality between students over and above their existing student stratification. Subsequent research by Gamoran (199x), Sorenson (199z), Braddock (199y) shows that tracking, as a feature of school organization, is a principal way in which students are organized for instruction and that, depending on where in the organizational structure of the school curriculum one falls, determines the quality of the learning experience. Student race is deeply implicated in track assignment. School desegregation research and research on tracking show that African American students have a much greater likelihood of being in the lower tracks of their schools.

The culmination of the harmful effects of tracking on poor and minority students' academic careers is in testing. Because tracking organizes students for instruction, it shapes course access. Taking the right courses--exposure to content and opportunity to learn--is a necessary, if not sufficient, prerequisite to performing well on achievement tests. Jencks and Philips (1999) have provided compelling evidence on this point. They report that Black students who take the AP courses score about as well as their white counterpart on the SAT. The problem is that very few African American students take these courses.

We can now assemble the list of accumulating disadvantages for African American and Latino/a students:

- a high proportion of Black and Latino students are at risk for reasons associated with poverty;
- household and community poverty translates into poor school funding and a lower concentration of quality educational resources in those schools;
- Black and Latino students and their families are more likely to live in racially segregated communities and attend schools with high concentrations of other minority students;
- schools characterized as high minority have been shown to score lower on most educational quality indicators including measures of teacher credentials and teacher experience;
- communities characterized as high minority and high poverty are more often in large urban areas, having to support large school districts with a weaker tax base;
- ability grouping and tracking, as educational practices, work disproportionately to the detriment of African American and Latino students; and
- standardized testing reveals the extent of limitations on opportunity learn for African American and Latino students and reduces educational choices and options.

The results of this set of accumulated experiences suggest persistent limitations on educational opportunity associated with race. The strong association of these early pipeline experiences with race and ethnicity, as well as socioeconomic status, makes it difficult to entertain the idea that the playing field has been made level, thereby eliminating the need for race sensitive policies and practices. If race is a gating factor early on in the education pipeline, then we should expect to see the effects of that gating in a restricted flow at later stages of the pipeline. That restricted flow should be observable both in overall levels of access and completion and in differentiated participation across the sectors of higher education. We turn next to the evidence on overall participation and participation by sector in higher education.

Enrollment and Segregation in Higher Education

Despite the claims of critics regarding goals as quotas, there is an inherent difficulty in assessing progress without some baseline measure as a standard. The tradition in higher education has been to rely on a measure of parity. Researchers and policymakers have looked to see the extent to which representation for a group is occurring at a rate commensurate with that groups' availability in a specified population category, usually referred to as an availability pool⁷. Tollet (198x) and others have recognized both an availability pool and an eligibility pool. The latter is composed of those members of the category who have satisfied the basic criteria required to participate. High school completion, for example, would be a basic prerequisite for college or university enrollment. Having earned a bachelor's degree would be an expected prerequisite for graduate/professional school enrollment. This chapter follows that custom.

Table 9 provides the framing data for the discussion of overall accomplishments for participation in higher education for the years included in this study. The percentage data in Table 9 also provides the relevant data for a discussion of parity. For starters, these data show that the level of fulltime undergraduate participation in higher education increased by about 1.3 million students from 1982 to 1996. The share of fulltime enrollment by each race category changed during this period also. The share of full time enrollment held by whites decreased from 79.4% in 1982 to 69.9% in 1996. The share of full time enrollment held by Blacks, Hispanics, Native Americans and Asians each increased. The increase for Blacks was 1.5%; for Latino/a 2%; for Native American, .4%; and for Asians, 3.1%. The Asian share of full time undergraduate enrollment actually more than doubled, increasing from 2.6% in 1982 to 5.7% in 1996. The answer to the general question about overall enrollment patterns is clear: **actual increases in full time enrollment occurred for each race category and the increases for African American, Latino, Native American and Asian resulted in a percentage decrease for whites even though their actual number increased.**

Even with these increases, by 1996 only Asian students and White students were enrolled full time in higher education at a level on a par with their population share or eligibility levels. Both enrolled at a rate exceeding their population and eligible share proportions. By 1996 Native Americans had achieved parity also according to these data. For Black and Latino/a students, achieving parity with respect to their population share or eligibility was still a distant goal. Charts 1 through 3 [not available for this draft] below show the parity accomplishments with regard to enrollment for each of the three enrollment periods reported here.

In 1982, Blacks were 13.1% of the college age population and 11.8% of the eligible pool, but held just a 9.7% (9.5% when all non-resident aliens are included) share of full time enrollment. By 1995 Blacks were 14.3% of the college age population and 13.3% of the eligible pool but held an 11.5% (10.9% when all non-resident aliens are included) share of the full time college enrollment. The change from 1982 to 1996 shows that Black full time undergraduate participation in higher education increased by about 1.5%. Blacks as a percentage of the eligibility pool also increased by 1.5%, from 11.8 % to 13.3%, yielding virtually no change in progress toward parity based on eligibility during this 14 year period. Even if we use the parity bases that exclude non-resident aliens, the change in participation for blacks, 1.8%, from 9.7% in 1982 to 11.5% in 1996, is a very slow rate of progress toward parity for the 14 year period.

Table 9. Total Full Time Undergraduate Enrollment By Race and Year

	1982		1988		1996	
	N	%	N	%	N	%
Black	567,388	9.5	630,318	9.2	800,450	10.9
Latino	314,987	5.2	442,560	6.5	528,157	7.2
N. Amer.	36,700	.6	47,465	.7	70,066	1.0
Asian	157,054	2.6	264,655	3.9	422,212	5.7
White	4,770,129	79.4	5,318,505	77.5	5,137,470	69.9
Total	6,004,445*		6,859,547*		7,351,972*	

*Non-Resident Aliens are included in the totals.

CHART 1
 Comparison of Enrolled Full-time Undergraduates
 to Proportions of College Age and Available Pool by Race and Gender, 1996

<i>Race</i>	<i>College Age (18-24) in 1000s March 1996</i>			<i>Eligible Pool (HS grads 18-24) in 1000s March 1996</i>			<i>Enrolled Full-time Undergraduates Fall 1996</i>		
	<i>M</i>	<i>F</i>	<i>Total</i>	<i>M</i>	<i>F</i>	<i>Total</i>	<i>M</i>	<i>F</i>	<i>Total</i>
Black	13.4% 1,637	15.3% 1,900	14.3% 3,538	12.3% 1,127	14.1% 1,375	13.3% 2,503	9.9% 311,134	12.9% 489,316	11.5% 800,450
Hispanic	14.9% 1,822	13.7% 1,704	14.3% 3,525	11.1% 1,017	9.9% 963	10.5% 1,980	7.3% 229,454	7.9% 298,703	7.6% 528,157
Native American	.9% 110	1.0% 119	.9% 229	.9% 80	.8% 81	.9% 162	.9% 29,872	1.1% 40,194	1.0% 70,066
Asian/Pacific Islander	4.1% 498	4.2% 518	4.1% 1,016	4.6% 416	4.5% 440	4.5% 856	6.6% 208,071	5.6% 214,141	6.1% 422,212
White	66.8% 8,173	65.9% 8,198	66.3% 16,370	71.1% 6,489	70.6% 6,871	70.8% 13,360	75.3% 2,375,940	72.6% 2,761,530	73.8% 5,137,470
Total	100.1% 12,239	100.1% 12,439	99.9% 24,678	100.0% 9,130	99.9% 9,730	100.0% 18,860	100.0% 3,154,471	100.1% 3,803,884	100.0% 6,958,355

Chart 2
 Comparison of Enrolled Full-time Undergraduates
 to Proportions of College Age and Available Pool by Race and Gender, 1988

<i>Race</i>	<i>College Age (18-24) in 1000s March 1988</i>			<i>Eligible Pool (HS grads 18-24) in 1000s March 1988</i>			<i>Enrolled Full-time Undergraduates Fall 1988</i>		
	<i>M</i>	<i>F</i>	<i>Total</i>	<i>M</i>	<i>F</i>	<i>Total</i>	<i>M</i>	<i>F</i>	<i>Total</i>
Black	12.9% 1,627	14.3% 1,895	13.7% 3,522	11.6% 1,103	12.9% 1,379	12.3% 2,482	8.1% 260,756	10.6% 369,562	9.4% 630,318
Hispanic	10.8% 1,360	9.7% 1,276	10.2% 2,636	7.9% 749	7.4% 791	7.6% 1,540	6.2% 196,986	7.0% 245,574	6.6% 442,560
Native American	.5% 62	.5% 71	.5% 133	.5% 46	.4% 44	.4% 90	.7% 21,298	.7% 26,167	.7% 47,465
Asian/Pacific Islander	2.8% 350	2.6% 345	2.7% 695	3.1% 292	2.6% 282	2.8% 574	4.4% 139,781	3.6% 124,874	3.9% 264,655
White	72.9% 9,165	72.9% 9,636	72.9% 18,801	77.0% 7,345	76.6% 8,181	76.8% 15,526	80.7% 2,583,961	78.1% 2,734,544	79.3% 5,318,505
Total	99.9% 12,564	100.0% 13,223	100.0% 25,786	100.1% 9,535	99.9% 10,677	99.9% 20,212	100.1% 3,202,782	100.0% 3,500,721	99.9% 6,703,503

Chart 3
 Comparison of Enrolled Full-time Undergraduates
 to Proportions of College Age and Available Pool by Race and Gender, 1982

<i>Race</i>	<i>College Age (18-24) in 1000s March 1982</i>			<i>Eligible Pool (HS grads 18-24) in 1000s March 1982</i>			<i>Enrolled Full-time Undergraduates Fall 1982</i>		
	<i>M</i>	<i>F</i>	<i>Total</i>	<i>M</i>	<i>F</i>	<i>Total</i>	<i>M</i>	<i>F</i>	<i>Total</i>
Black							8.3%	11.1%	9.7%
							240,787	326,601	567,388
Hispanic							5.0%	5.8%	5.4%
							145,206	169,781	314,987
Native American							.6%	.6%	.6%
							17,863	18,837	36,700
Asian/Pacific Islander							2.9%	2.5%	2.7%
							84,883	72,171	157,054
White							83.2%	80.0%	81.6%
							2,423,094	2,347,035	4,770,129
Total							100.0%	100.0%	100.0%
							2,911,833	2,934,425	5,846,258

The disparity for Latino/a students is still more different as they are actually losing progress toward parity based on either measure. Latino students were 6.9% of the population pool and 4.8% of the eligible pool in 1982. By 1996, the comparable figures are 14.35 and 10.55 respectively. This shows that the Latino college age population has grown substantially, more than doubling over the 14 year period. Moreover, relative to that growth, there has been an a comparable doubling of the Latino eligibility pool, from 4.8% in 1982 to 10.5% in 1996. Full time enrollment however has increased from 5.4% (5.2%) in 1982 to 7.6% (7.2%) in 1996, a 2% change. Clearly, Latino students, despite substantial growth in enrollment and in both their population share and eligibility share, have lost ground toward parity. On the one hand, the progress that has been made in participation in higher education for Blacks and Latino/a is substantial and growth in Latino participation approaches that for Asians. On the other hand, parity remains a distant goal for both African Americans and Latino/a. The current challenges to admissions practices that use race as a factor in admissions threaten what progress toward parity we find here. At the same time, it is not likely that the progress in participation that has been made is equally distributed across all sectors of higher education. Because each sector differs, it is important to examine the rates of enrollment in selected sectors.

Below we examine the distribution of this participation across four sectors of higher education: Research I Universities, Research II Universities, Doctoral Universities and Masters and Bachelor's Colleges and Universities⁸. We focus especially on the public segment of each sector. To begin the discussion of full time enrollment in higher education by sector, we start with the overall distribution of student enrollment across the sectors as defined above⁹. Table 10 gives the distribution for full time undergraduate enrollment by sector and year. The overall distribution across the sectors establishes the contribution that each sector makes to overall full-time undergraduate enrollment and provides a benchmark against which each of the racial category enrollment percentages can be compared for each year.

As might be expected, the large number of Masters and Bachelors colleges have the largest share of enrollment for each of the three years reported here. The next largest share of enrollment is in two-year colleges, followed in order of magnitude by Research I, Doctoral and Research II institutions. Fully one-third of all full time students were in the Masters and Bachelors sector for 1996 and this was actually a smaller percentage than was true for 1982 or 1988. The actual share increased by one-quarter million in this sector from 1982 to 1996. The second highest enrollment level in four-year college and university sectors is found for Research I universities. The net change in this category from 1982 to 1996 is 154,170. The greater part of this change in undergraduate enrollment in the Research I sector occurred between 1982 and 1988. Growth in this sector was only about 8,000 from 1988 to 1996. As Table 10 shows, changes in the number of students enrolled as Non-Categorized from 1982 to 1996 are large. For this reason, the following discussion has to be considered a cautious one given that in 1996, fully nine percent of the students are non-categorized compared to just one-half of one percent in 1982.

Figures 1 and 2 present full time undergraduate enrollment participation levels by sector and race for 1982,1988 and 1996. Figure 1 covers all reporting institutions while Figure 2 is for public institutions only. Several general points about the four graphs in Figures 1 and 2. First, each graph shows the percentage of each race group, for each year within that sector. The actual count also appears on the graph. This percentages

Figure 1: Undergraduate Enrollment By Race and Carnegie Classifications
All Institutions

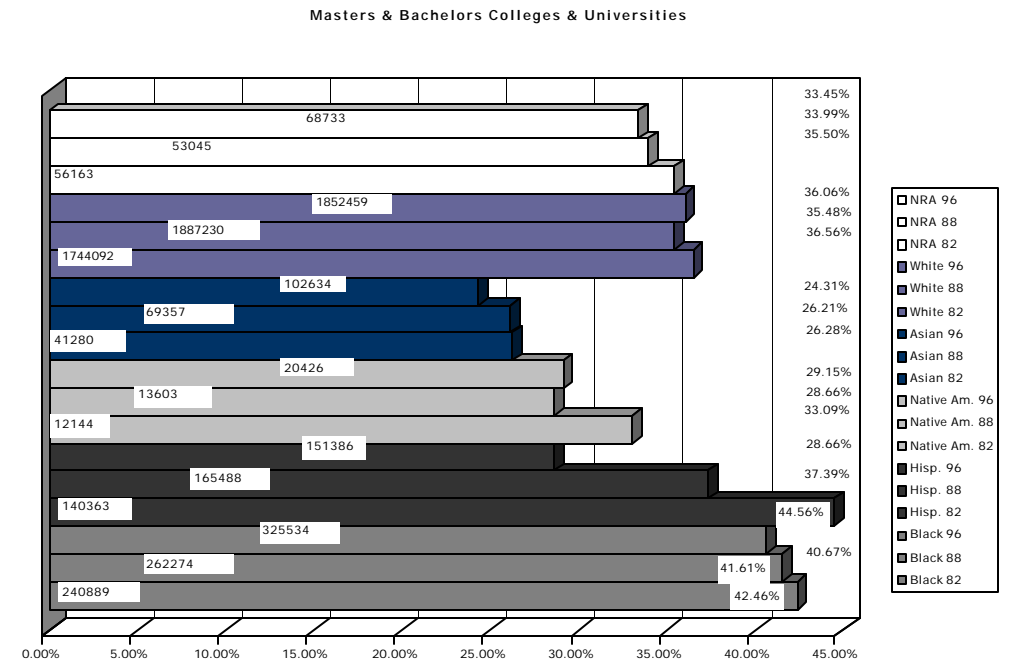
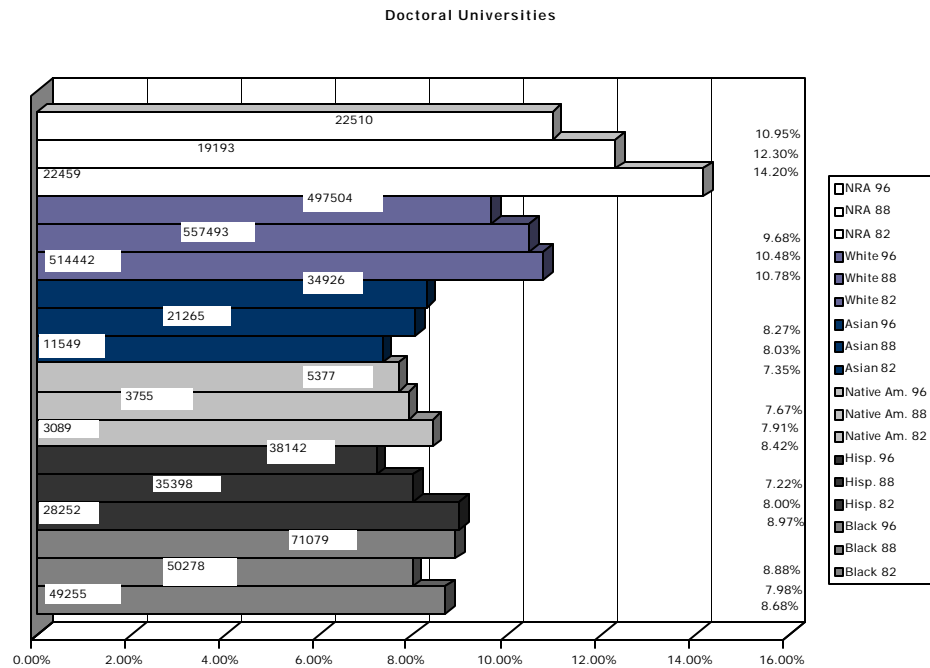
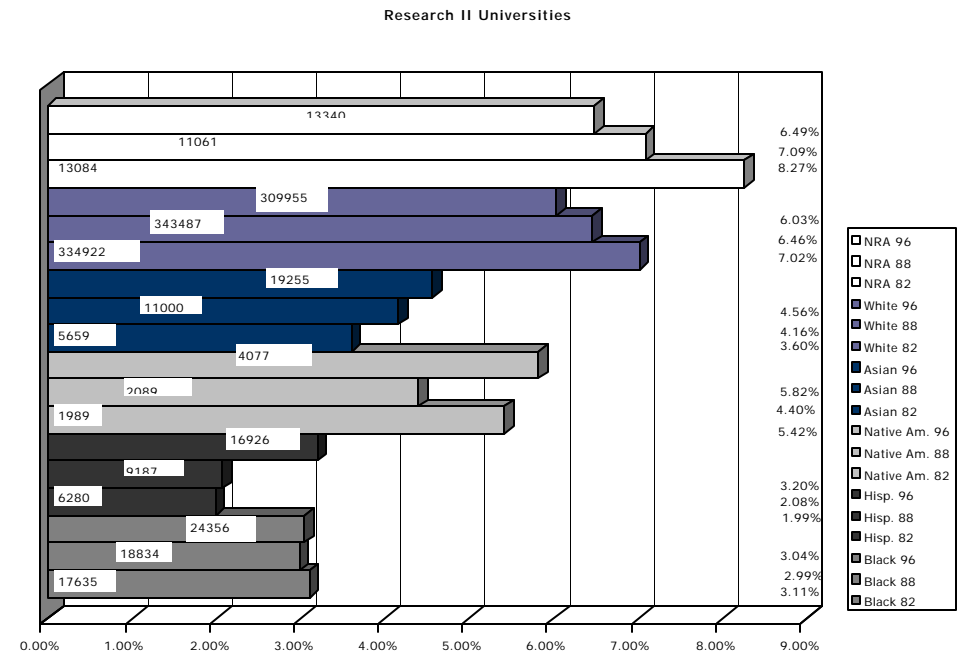
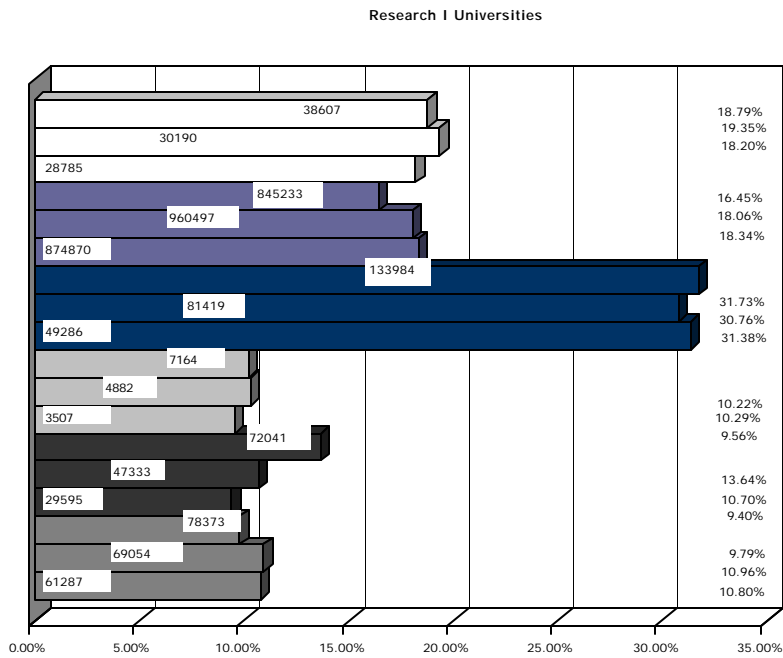
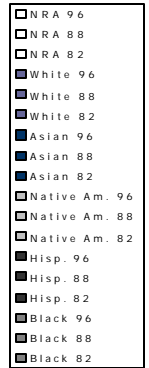
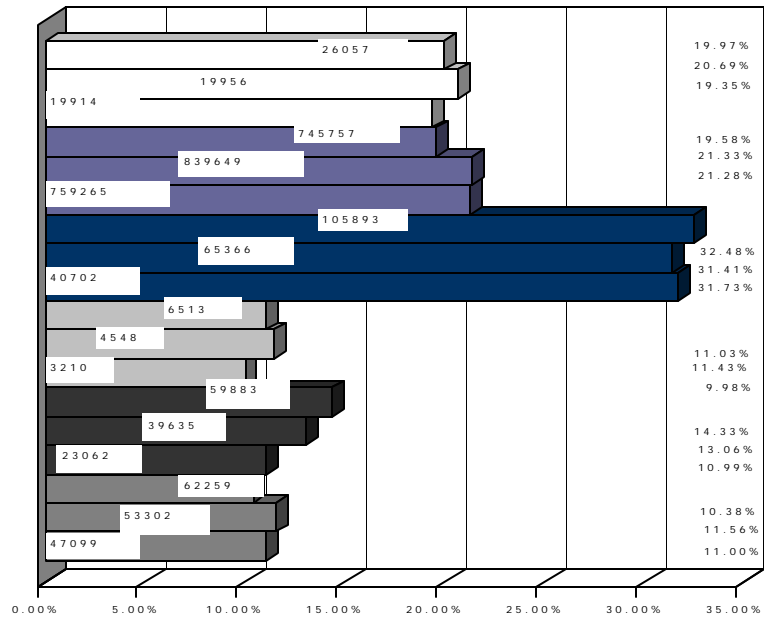
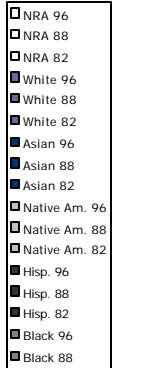
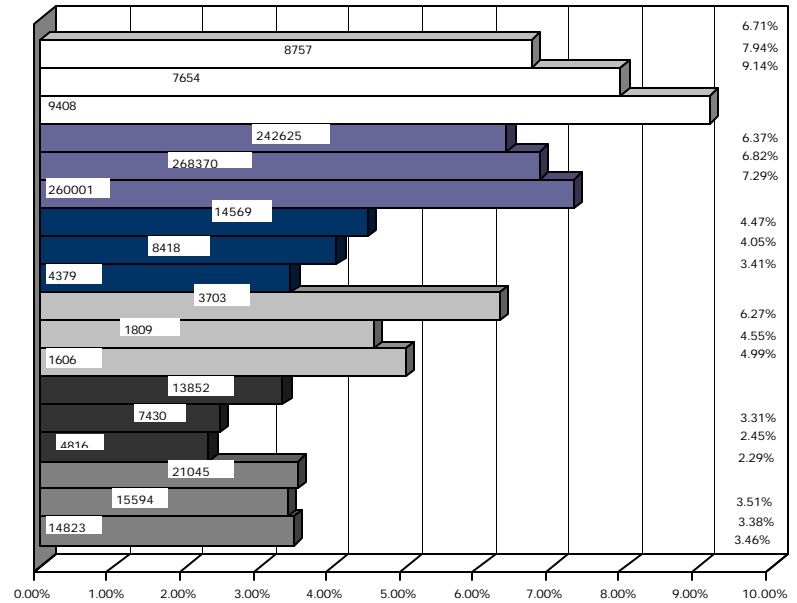


Figure 2: Undergraduate Enrollment By Race and Carnegie Classifications
Public Institutions

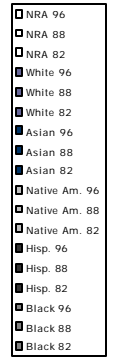
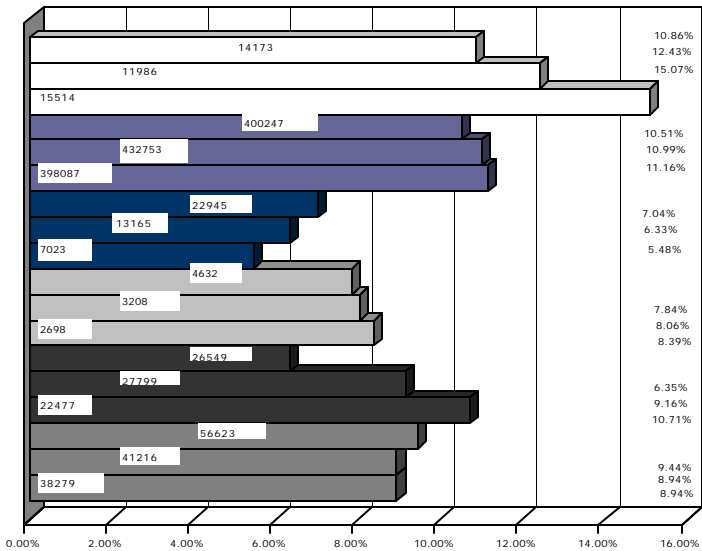
Research I Universities



Research II Universities



Doctoral Universities



Masters & Bachelors, Colleges & Universities

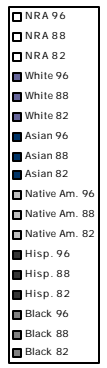
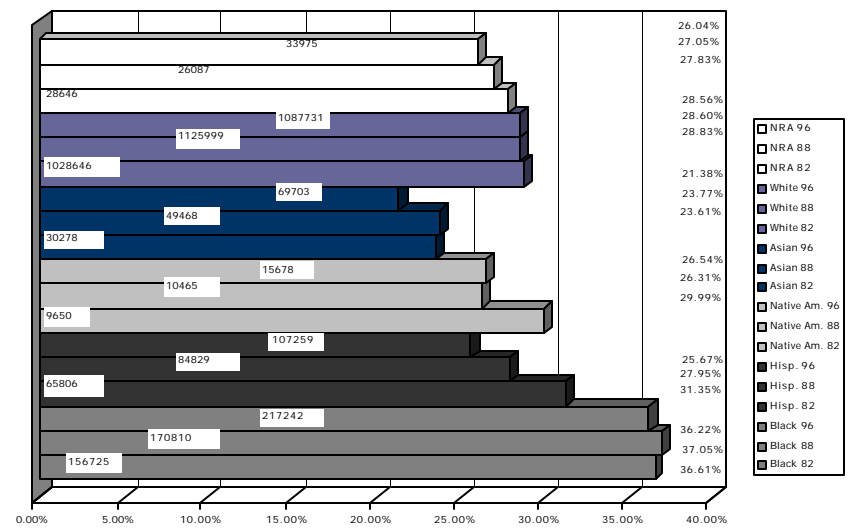


Table 10. Overall Full Time Undergraduate Enrollment by Carnegie Category and Year

Carnegie Category	1982		1988			1996		
	N	%	N	Enrollment %	% increase	N	Enrollment %	% increase
Res. I	1,047,330	17.4	1,193,375	17.4	13.9	1,201,500	15.5	1.0
Res. II	379,569	6.3	395,658	5.8	4.2	396,710	5.1	.3
Doctoral	629,046	10.5	687,382	10.0	9.3	685,657	8.8	-.3
MA/BA	2,234,931	37.2	2,450,997	35.7	9.7	2,587,284	33.3	5.6
Assoc.	1,517,683	25.3	1,741,810	25.4	14.8	1,990,171	25.6	14.3
Tribal	1,723	.03	3,973	.1	231.0	7,714	.1	194.2
Other	165,887	2.8	206,365	3.0	124.4	192,626	2.5	-6.7
Non-catg.	28,276	.5	179,987	2.6		706,732	9.1	
Total	6,004,445		6,859,547		12.5	7,351,972		13.3

enable the within sector concentration comparisons while the counts allow contrasts in growth over the three time points.

Generally, the pattern for each race group's distribution across the four sectors parallels that of the overall pattern shown in Table 10. The exception is for Asian students who have their highest full time undergraduate enrollment in the Research I sector. Indeed, the key findings from the Figure 1 graphs are the patterns of substantial full time enrollment growth for Asian and Latino/a students in each of the four sectors. Actual student counts increased nearly by a factor of three for Asian and Latino/a students in Research I and Research II Universities. Increases in the two other sectors shown doubled for these two groups between 1982 and 1996. Asian enrollment also nearly tripled in Doctoral universities also.

For Native American students and African American students, there were enrollment increases in all sectors also but not as dramatic. Native American's enrollment counts in the Research I and Research II sectors was twice as large in 1996 compared to 1982. African Americans experienced the lowest rate of change of any minority group in any sector. The increase in their share of enrollment in the Research 1 sector from 1982 to 1996 was just 28% ($78373 - 61287/61287 = .28$). By contrast, their percentage change in the Doctoral sector was 44% and in the Masters and Bachelor's sector the increase was 35%. In short, the increases for African American enrollment shares are larger in the somewhat less selective sectors.

We had also anticipated that African Americans would have a greater share of their enrollment in the public segment of each sector except the Masters and Bachelor's sector where there are a number of private Historically Black Colleges and Universities. Figure 2 shows this to be the case. In each sector except the Masters and Bachelors sector the percentage of African American enrollment in the public segment of each sector is greater than is the corresponding percentage for all institutions (Figure 1).

These results demonstrate the diversity of enrollment patterns and especially the different levels of representation found for each race group in each sector. It is clear in these data that the fourteen year period from 1982 to 1996 provided dramatic enrollment increases for students of color. These changes were experienced quite differently for African Americans compared to the other groups. For African Americans, the rate of increased access has been lower and this lower rate of change underscores the challenge of achieving parity either with respect to the population pool or the eligibility pool.

Graduate Enrollment

Graduate enrollment and especially enrollment in topflight professional schools and programs have been at the center of the current debate over the affirmative use of race in admissions. In *Hopwood*, it was admission to the law school, and it is also now at Michigan, along with the undergraduate admissions process. Here again, our focus is on the Research I sector and primarily focused on the enrollment patterns of African Americans as theirs have been the primary admissions decisions that have been challenged. Moreover, particular attention is given to the public segment of the different sectors.

Graduate enrollment patterns are shaped by the college and university size and number, as was the case for Undergraduate enrollment. For graduate enrollment, Research I Universities enroll the greatest numbers of fulltime graduate students followed by Masters and bachelors colleges and Universities, Doctoral Universities and Research

II Universities. This pattern of enrollment holds for the distribution of each race group, for each year included in the study. Table 11 provides the overall distribution for graduate enrollment for each year.

The 1996 total graduate enrollment 1016397 is an increase of 196% for the 14 year period between 1982 and 1996. The major increase appears to have come between 1982 and 1988 when full time graduate enrollment nearly doubled. The overall change in the Research I sector shows a 91% increase from 1982 to 1996. The Masters and Bachelor college sector experienced the most dramatic growth. Full time graduate enrollment more than doubled in this sector from 1982 to 1988 and increased by nearly half again from 1988 to 1996. Figure 3 and Figure 4 present the results for graduate enrollment by race, sector and year.

Although all groups have their highest concentrations of full time graduate enrollment in the Research I sector, there are important group differences. For 1996 among domestic students, Asian students have the highest concentration of fulltime graduate enrollment in the Research I sector followed by Latino/a, White, Native American and African American students. African Americans have the lowest concentration in the Research I sector for both 1982 and 1996. African American students have the highest concentration of full time graduate student enrollment in the Masters and Bachelors sector followed by Latino/a, Native American, White and Asian students.

African American student enrollment in the Research I sector increased by 228% from 1982 to 1996 growing from 6,503 to 21,321. Their share of enrolment in this sector increased from 3% to 5.2%. Growth in the Masters and Bachelor's sector was greater, increasing by 269%.

It appears from these data that the private segment (compare Figure 3 for all Institutions with Figure 4 for Public institutions)of the sectors played an important role in increasing African American participation in graduate education. For example, in comparing the 1996 and 1982 public shares for the Research I sector, the 1996 total is 61% of graduate enrollment while the 1982 count for the Research I sector was 65% of African American's full time graduate enrollment. Perhaps most striking here is that while the Research I sector accounts for 52% of overall enrollment in 1982, the share for African Americans was 39%. By 1996 the Research I Sector accounts for 33% of Black graduate enrollment compared to 41% overall. The result is that the share of African American graduate enrolment in the Research I sector appears to be getting closer to the overall level of participation in this sector for all groups, giving the appearance of greater equity. But, it may well be because the overall share of total graduate enrollment outside the Research I sector is increasing at a greater rate.

Finally, it is important to note that the overall increase in African American full time graduate enrollment (228%) is greater than the increase for total graduate enrollment (196%). This is a significant accomplishment and it is worthwhile to note that it has occurred largely during a period of relative support for the affirmative use of race in admissions decisions. Even with these increases however, African American students continue to remain well below parity in graduate degree attainment.

The pattern for Latino students differs from that for African Americans. Note that Latino students participation overall increased by about 280%, much greater than the overall rate of increase for this period. Latino participation in the Research I sector was close to the overall average in 1996, 39.3% compared to 41%, indicating their participation increasingly on a par with the overall pattern. In 1982, the public segment of graduate

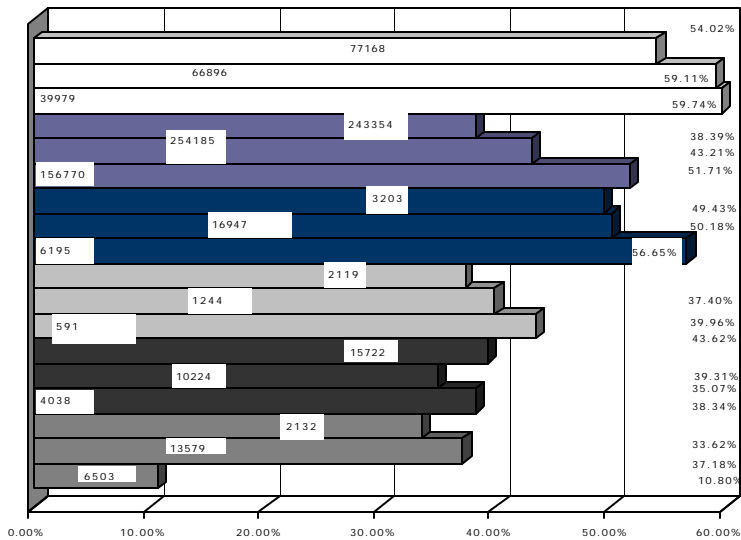
Table 11. Overall Full Time Graduate Enrollment by Carnegie Category and Year

Carnegie Category	1982		1988			1996		
	N	%	N	Enrollment %	% increase	N	Enrollment %	% increase
Res. I	214,076	52.3	363,075	45.2	69.6	408,661	40.21	12.6
Res. II	42,218	10.3	64,055	7.8	51.7	78,556	7.7	22.6
Doctoral	61,192	14.9	117,053	14.6	91.3	146,337	14.4	25.0
MA/BA	67,358	16.5	134,628	16.7	99.9	200,121	19.7	44.7
Total*	409,568		804,002		96.3	1,016,397		26.4

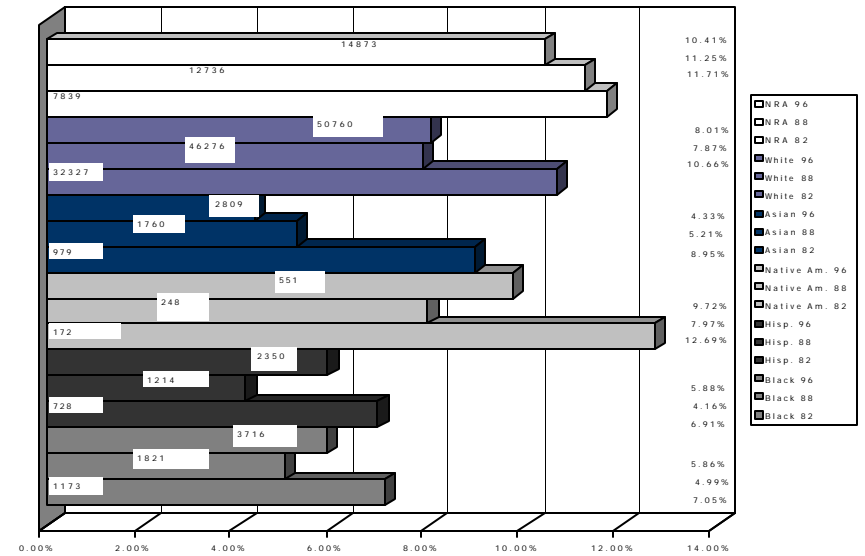
*The totals include the categories 'Other' and 'Non-Categorized' and is larger than the sum of the four categories listed.

Figure 3: Full Time Graduate Enrollment By Race and Carnegie Classifications
All Institutions

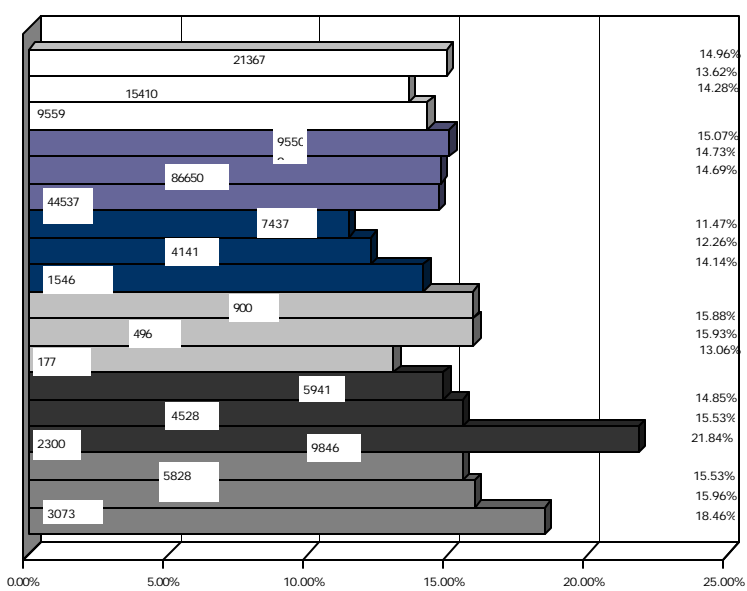
Research I Universities



Research II Universities



Doctoral Universities



Masters & Bachelors Colleges & Universities

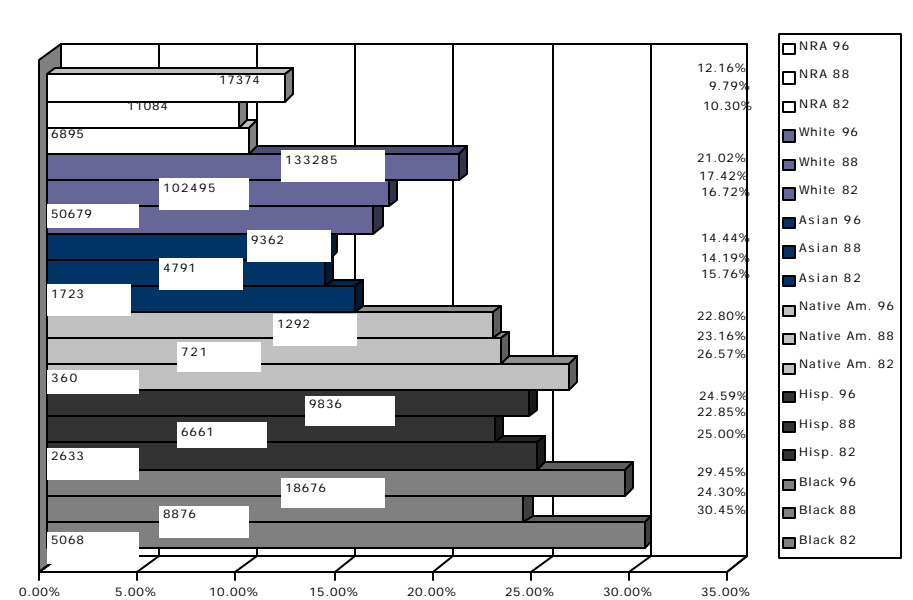
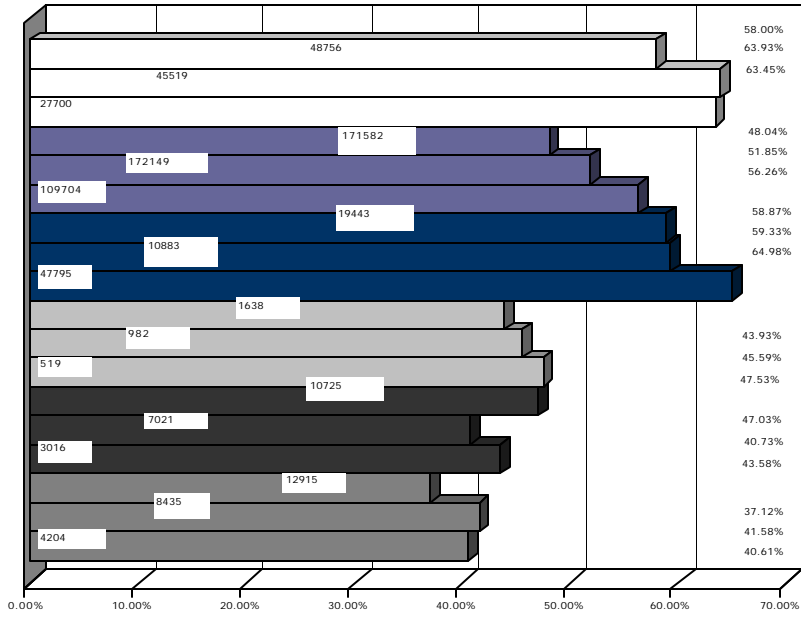
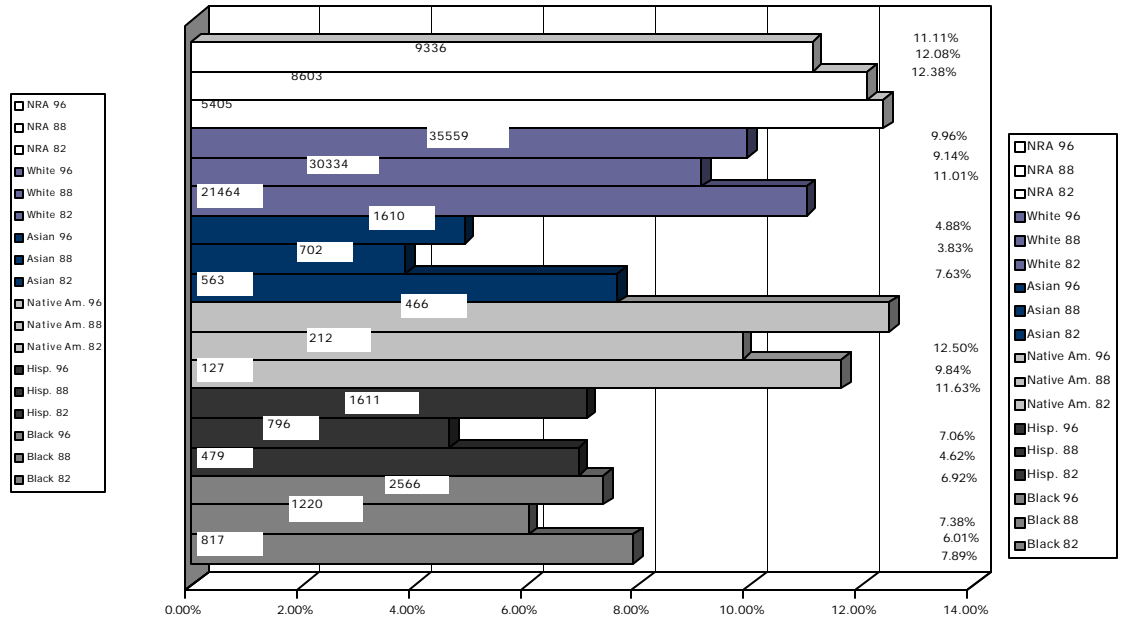


Figure 4: Full Time Graduate Enrollment By Race and Carnegie Classifications
Public Institutions

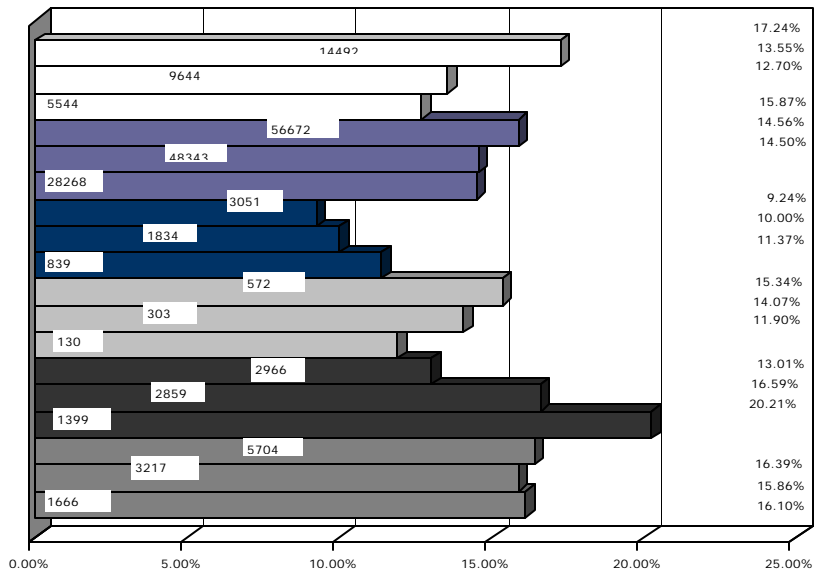
Research I Universities



Research II Universities



Doctoral Universities



Masters & Bachelors, Colleges & Universities

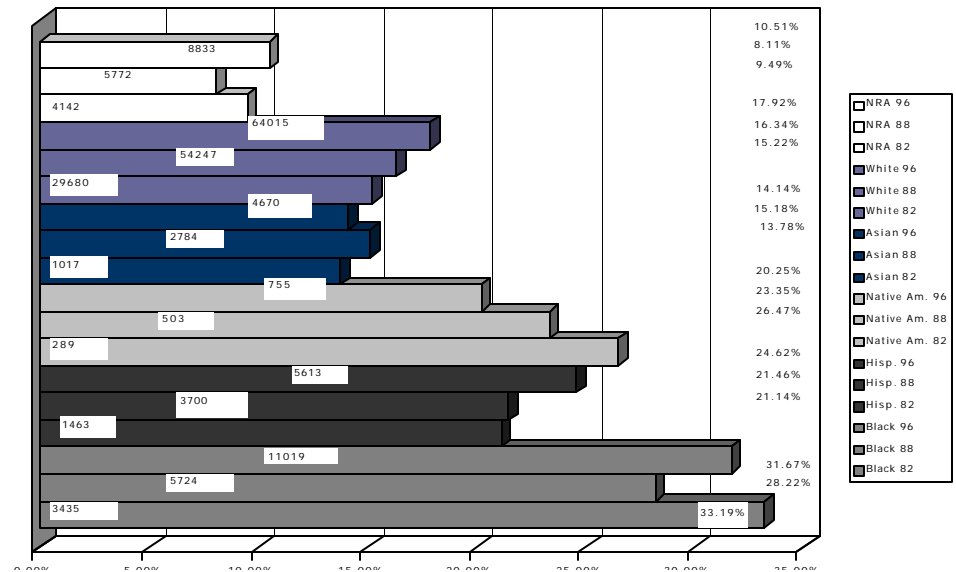
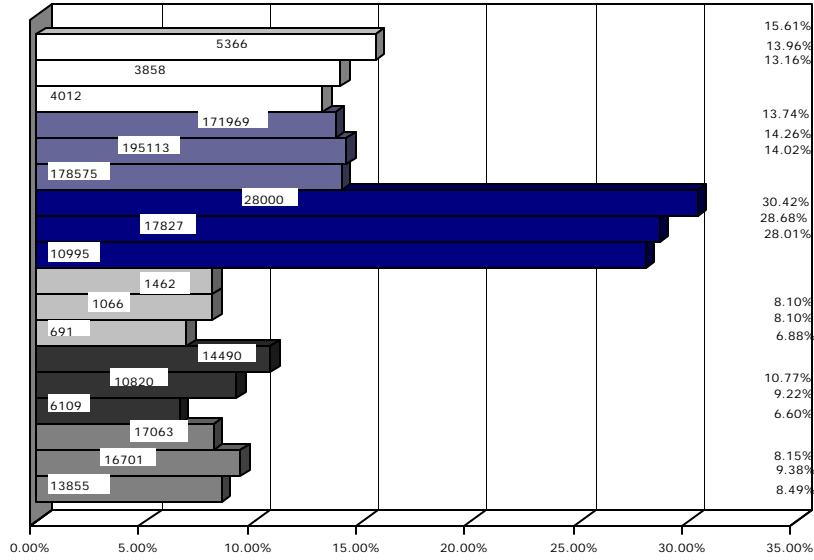
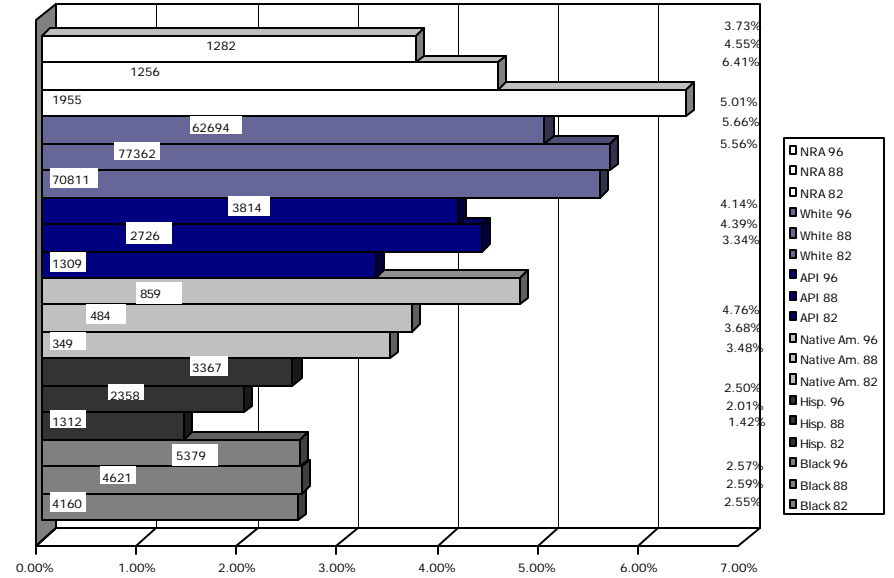


Figure 5: First Time Full Time Freshmen Enrollment By Race & Carnegie Classifications

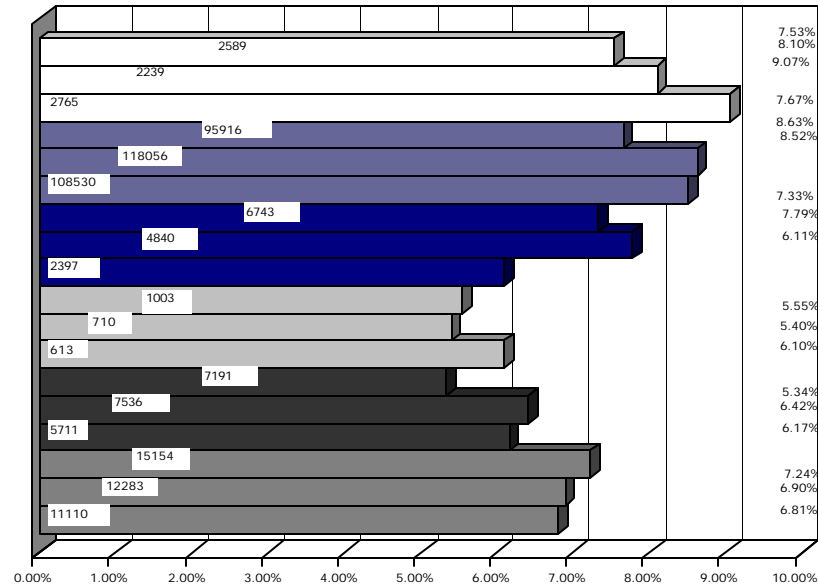
Research I Universities



All Institutions



Doctoral Universities



Masters & Bachelors Colleges & Universities

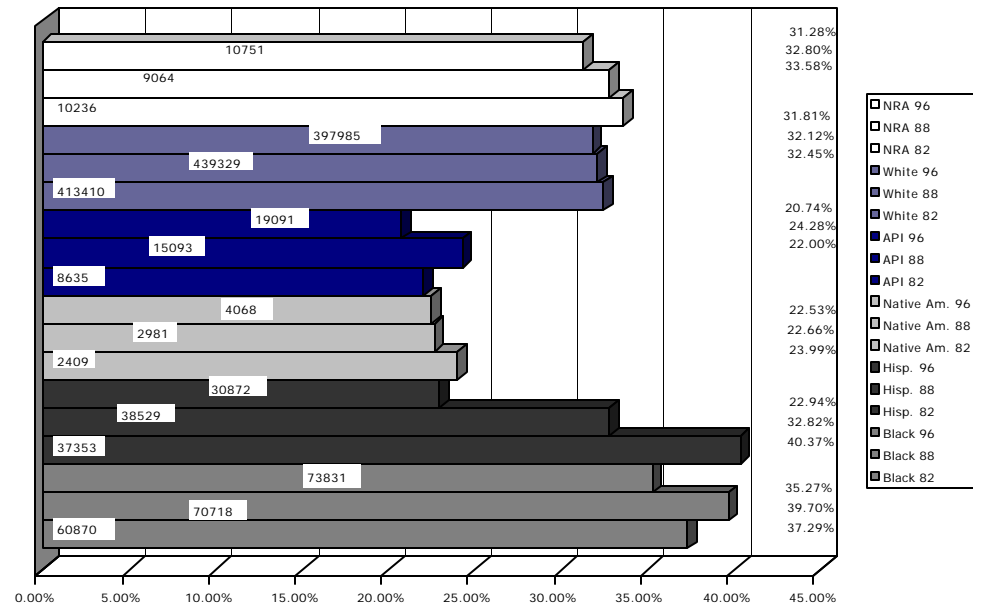
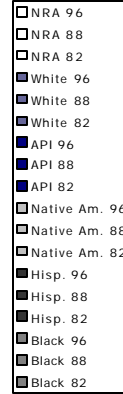
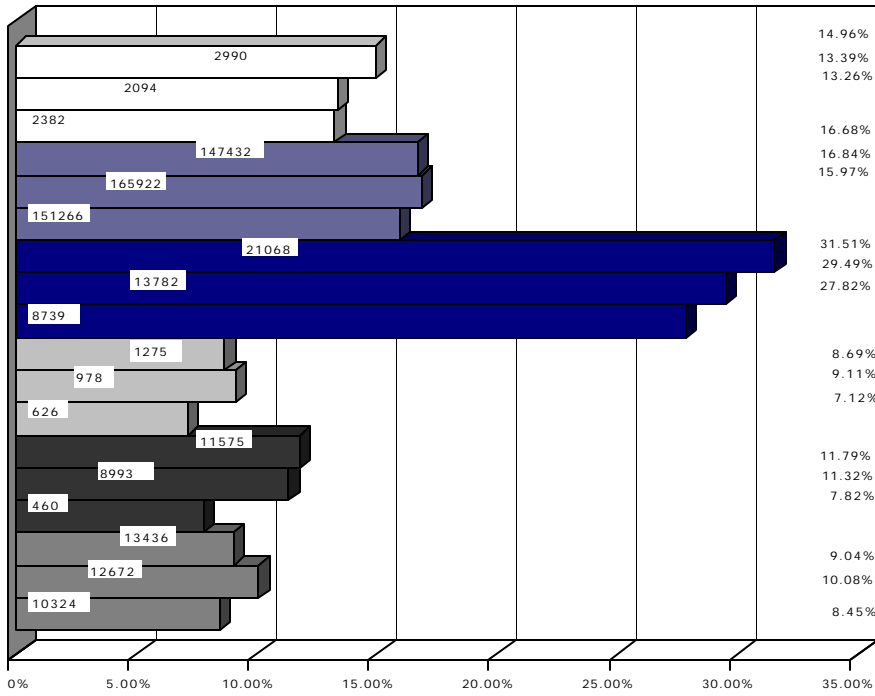
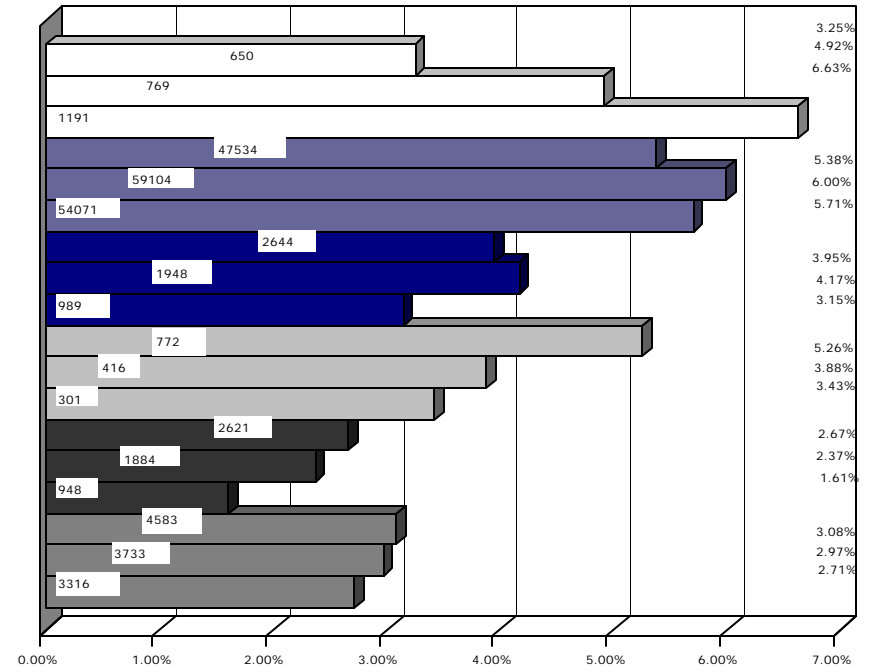


Figure 6: First Time Full Time Freshmen Enrollment By Race & Carnegie Classifications

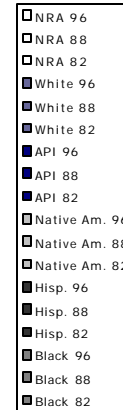
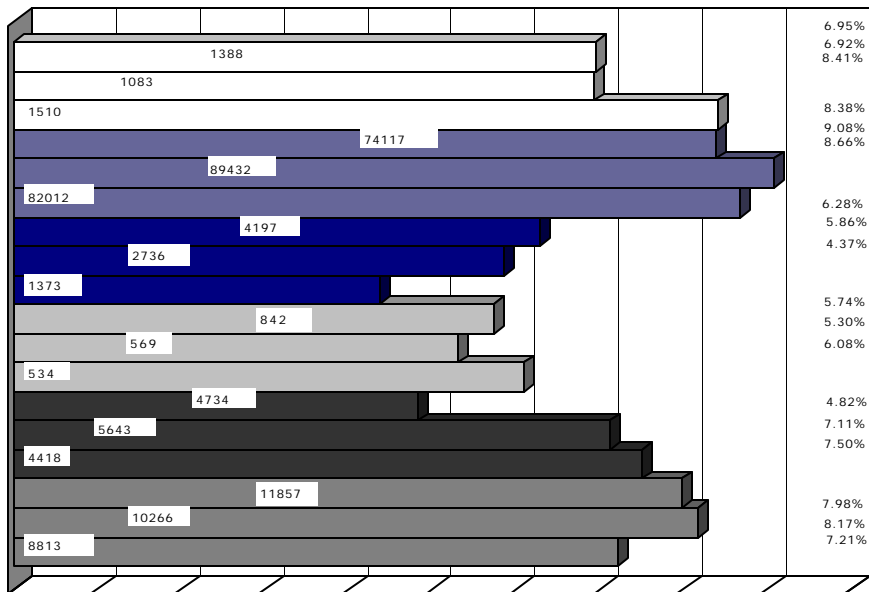
Research I Universities



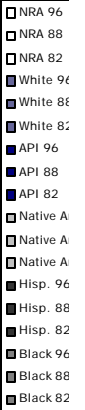
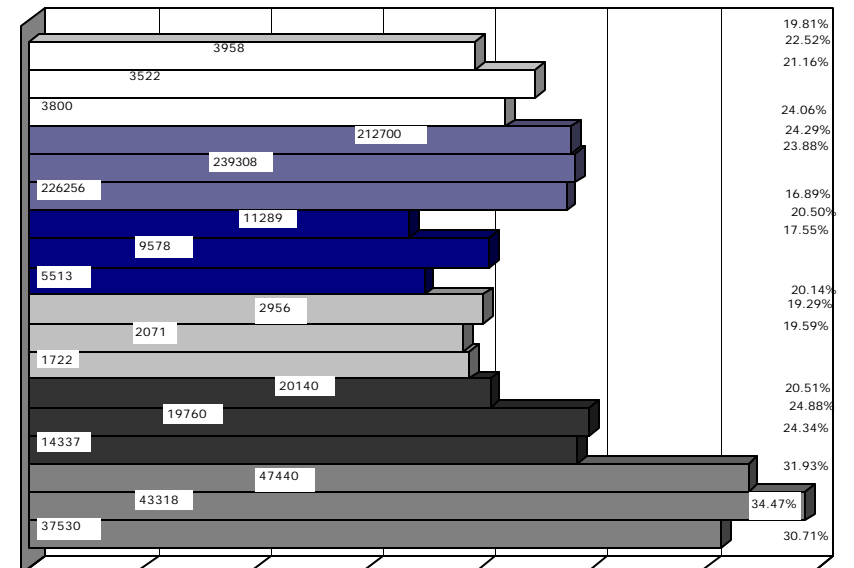
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education was especially important for Latino students. For example, in the Research I sector in 1982, the public segment (Figure 4) accounted for 75% of enrollment in this sector. In 1996, the public segment accounted for 68% of Latino/a enrollment in this sector. It is notable that the public segment is substantial for both African American and Latino/a participation in this sector.

Segregation by Sector

The calculated segregation index, Figure 7 and Figure 8, shows different levels of segregation in each sector for undergraduate enrollment. The Research I sector is the least segregated while the Masters and Bachelors sector has the highest levels of segregation. This is due in part to the national and international recruitment patterns of the Research I sector, and the more regional character of the Masters and Bachelors sector, including the latter's Historically Black Colleges and Universities, Tribal Colleges and Hispanic impact colleges and Universities. Still, the relative stability of the levels of segregation while enrollment increases is significant and requires further investigation.

More importantly, it is clear that the largest numbers of students enrolled full time at the undergraduate and graduate levels are enrolled in the more segregated sectors-- Doctoral and Masters and Bachelors. This is especially the case for African American and Latino/a students. Significantly, segregation is substantially different and lower in the public segment of each sector for all groups except Asians in the Research I sector and African Americans in the Masters and Bachelors sector.

The segregation level for each race category is different and it is different in each sector. It is notable that in the Research I sector, Asian students have the highest segregation score at each time point and the highest in the Research II sector for 1996. African American and Latino/a students have their highest levels of segregation in the Masters and Bachelors and Doctoral sectors. Latino/a students in the Doctoral sector experienced a reduction in segregation from about 50% to less than 20% and from 59% to 30% in the Masters and Bachelors sector. African American students' segregation levels remained remarkably stable in both sectors about 20% in the Doctoral sector and about 48% in the Masters and Bachelors sector. Given the variability in segregation by sector and by race within sector, it is likely that very different factors are operating to shape these outcomes. Whatever the set of factors, it also seems that they are persistent over time and irrespective of the relative number of students involved.

Degree Attainment

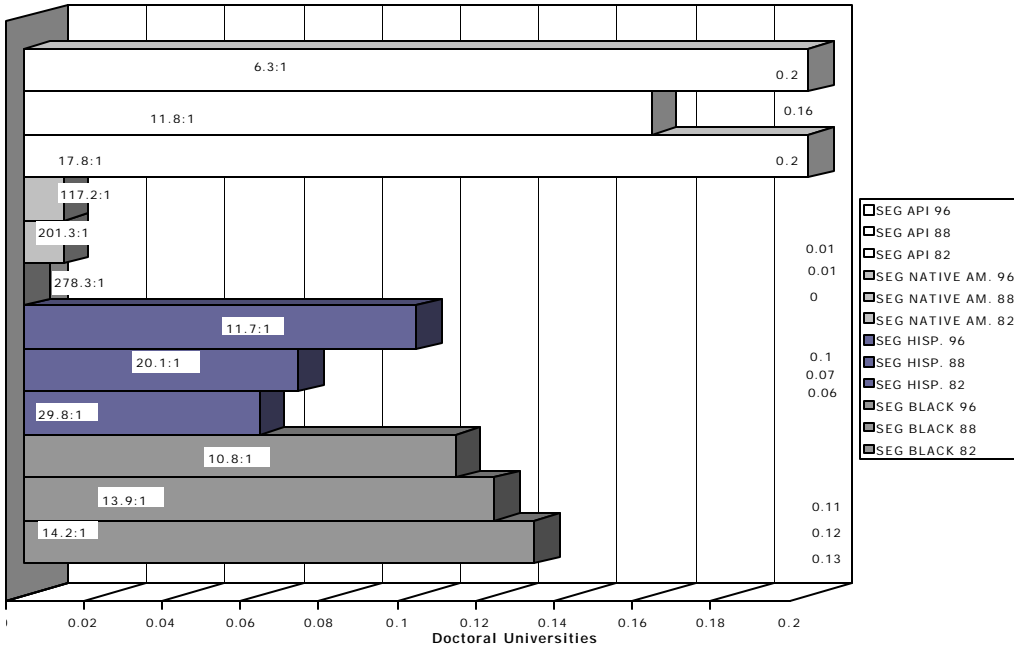
Overall patterns of earned degrees awarded, not surprisingly, follow the patterns of enrollment. The Masters and Bachelor sector accounts for the largest share of BA degrees followed by the Research I Sector. Unlike the enrollment distribution by race, the patterns for earned degrees for each group is consistent with the overall pattern. Like the pattern of enrollment however, there are substantial within sector differences for the BA degree.

[Figures 9, 10, 11, 12, 13, 14 about here]

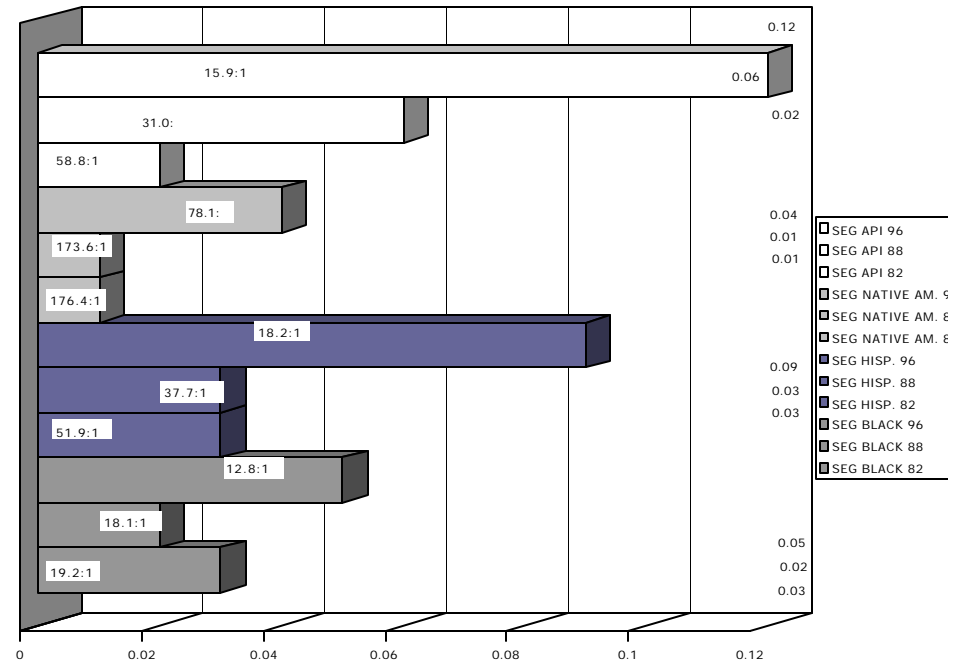
- African Americans earned the smallest share (14.9%) of their degrees from the Research I sector in 1996. In 1982, it was Latino/a students who earned their lowest share in this sector. African American students in 1980 were second only to Whites in the number of BA degrees earned in the Research I sector. By 1994 the African

Figure 7: Undergraduate Racial Segregation By Race and Carnegie Classifications
All Institutions

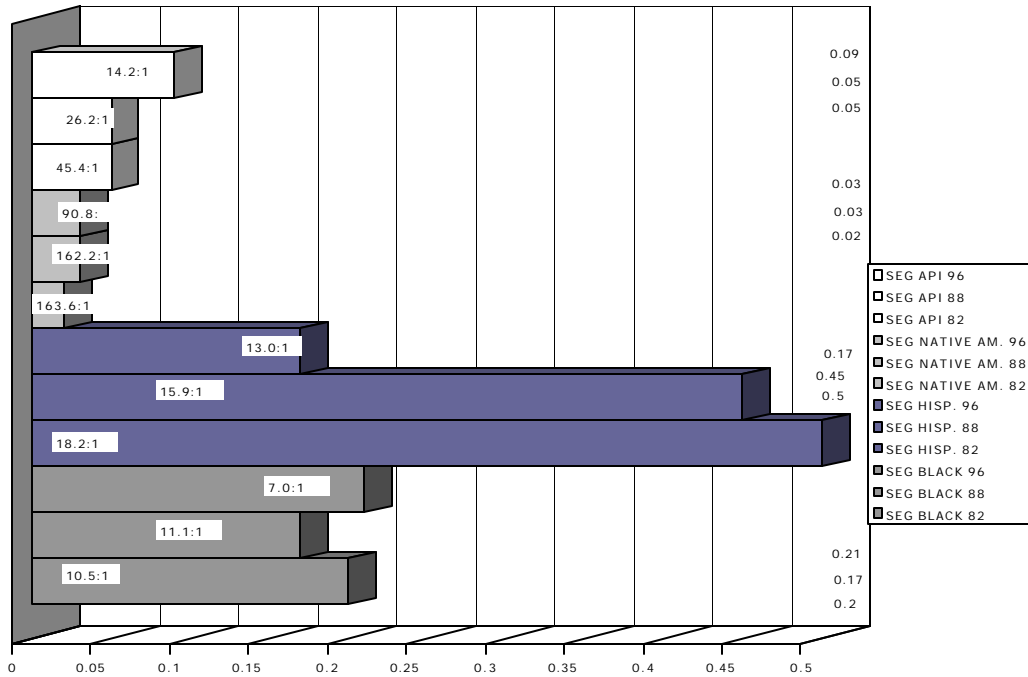
Research I Universities



Research II Universities



Doctoral Universities



Masters & Bachelors Colleges & Universities

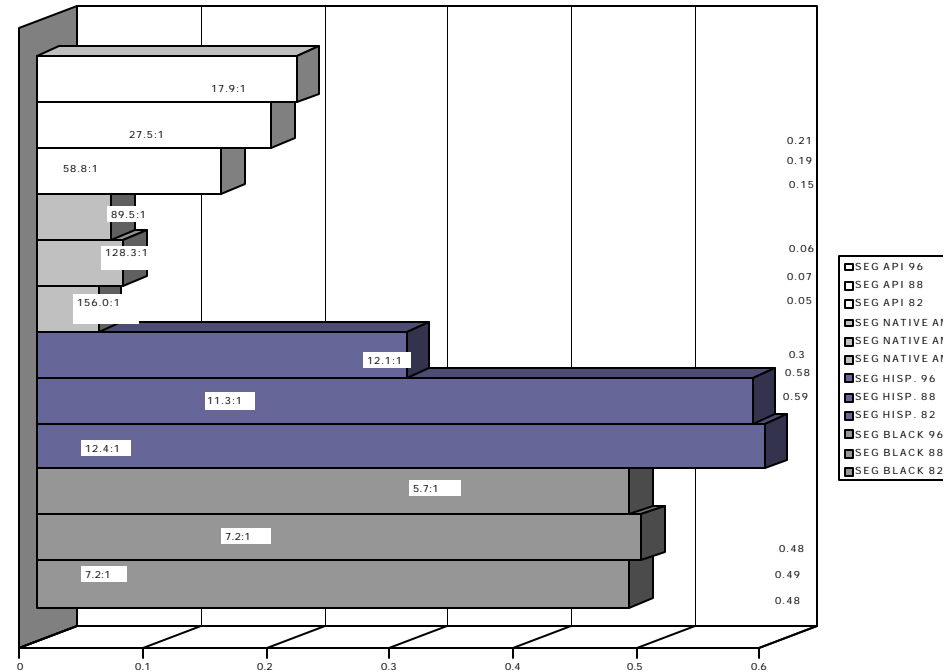
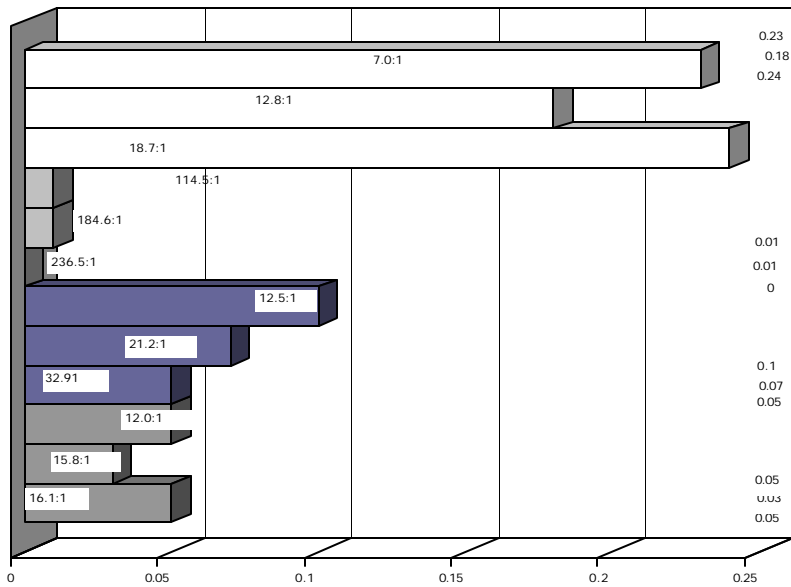
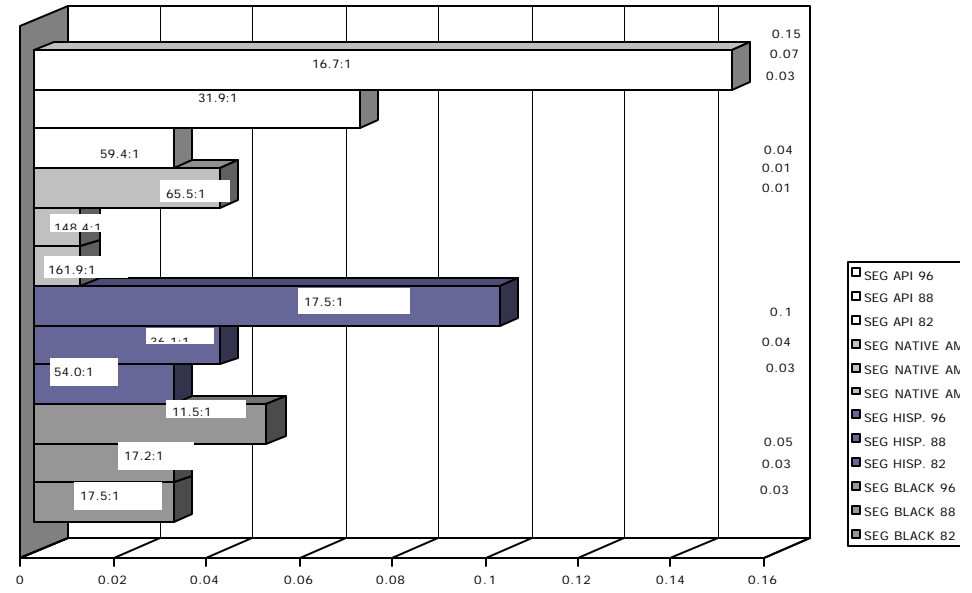


Figure 8: Undergraduate Racial Segregation By Race and Carnegie Classification
Public Institutions

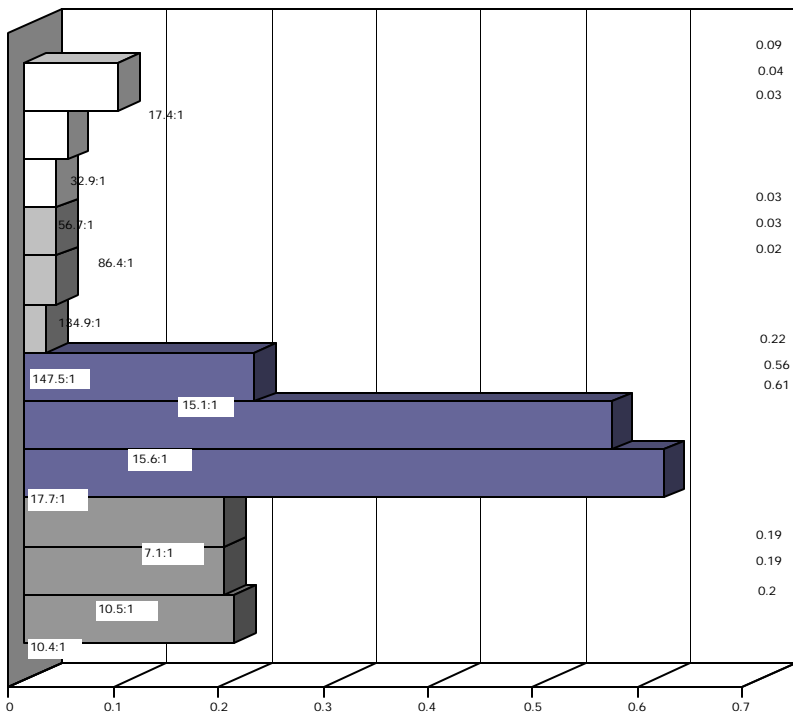
Research I Universities



Research II Universities



Doctoral Universities



Masters & Bachelors Colleges & Universities

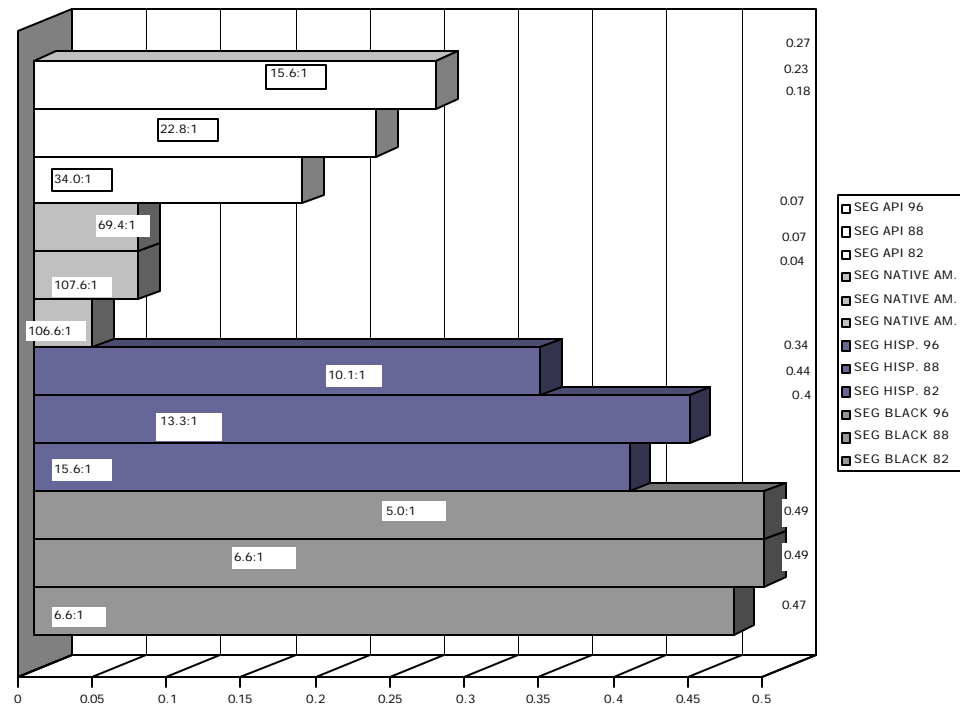
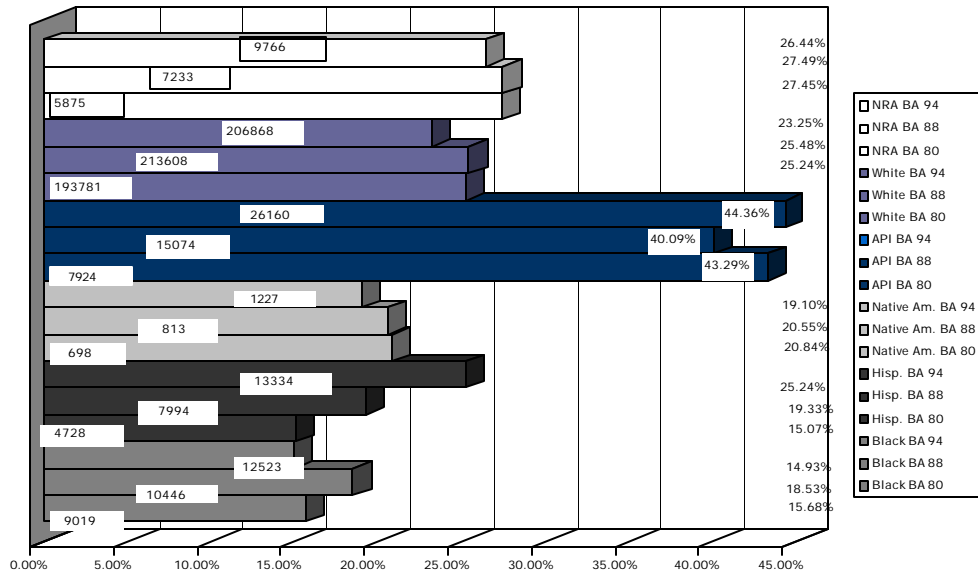
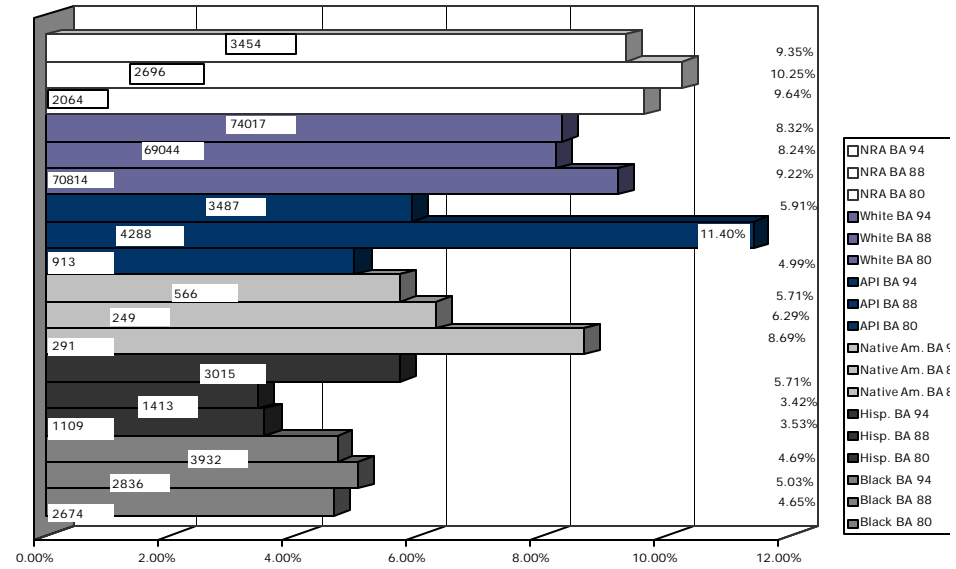


Figure 9: BA Degrees Awarded by Race and Carnegie Classifications
All Institutions

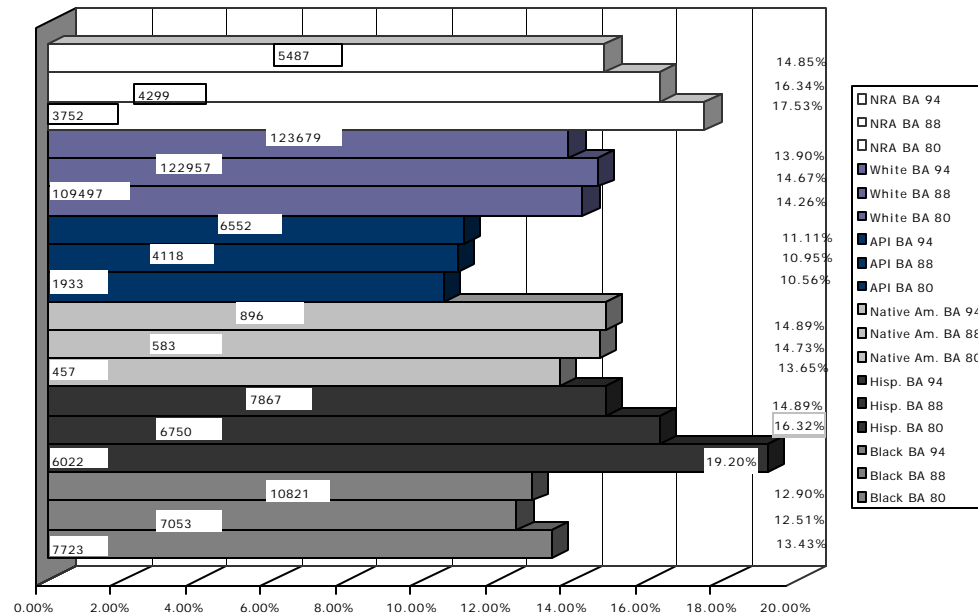
Research I Universities



Research II Universities



Doctoral Universities



Masters & Bachelors Colleges & Universities

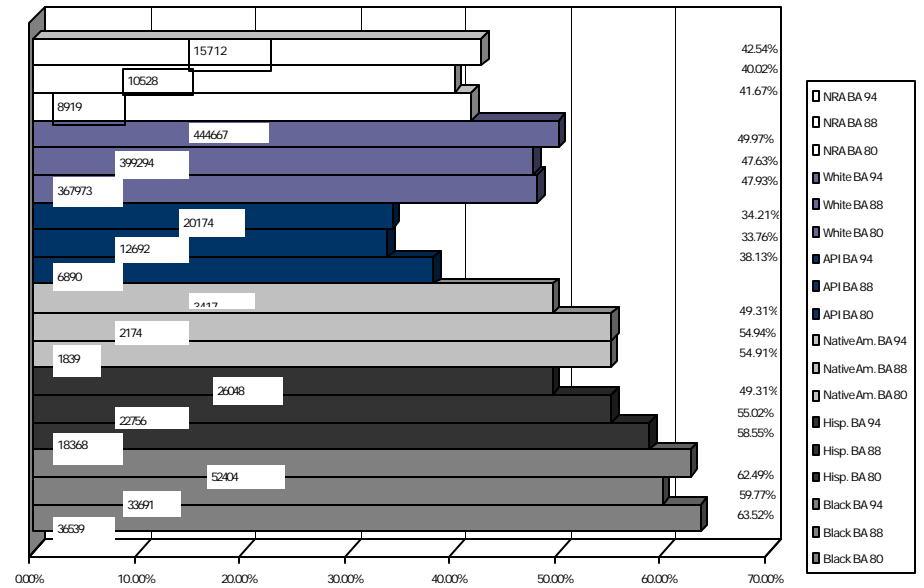
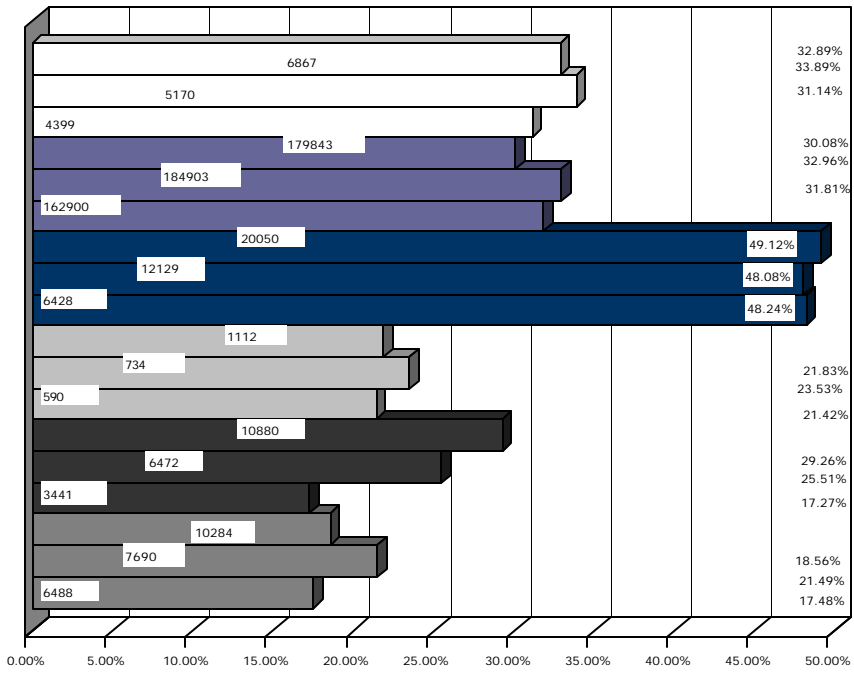


Figure 10: BA Degrees Awarded by Race and Carnegie Classifications

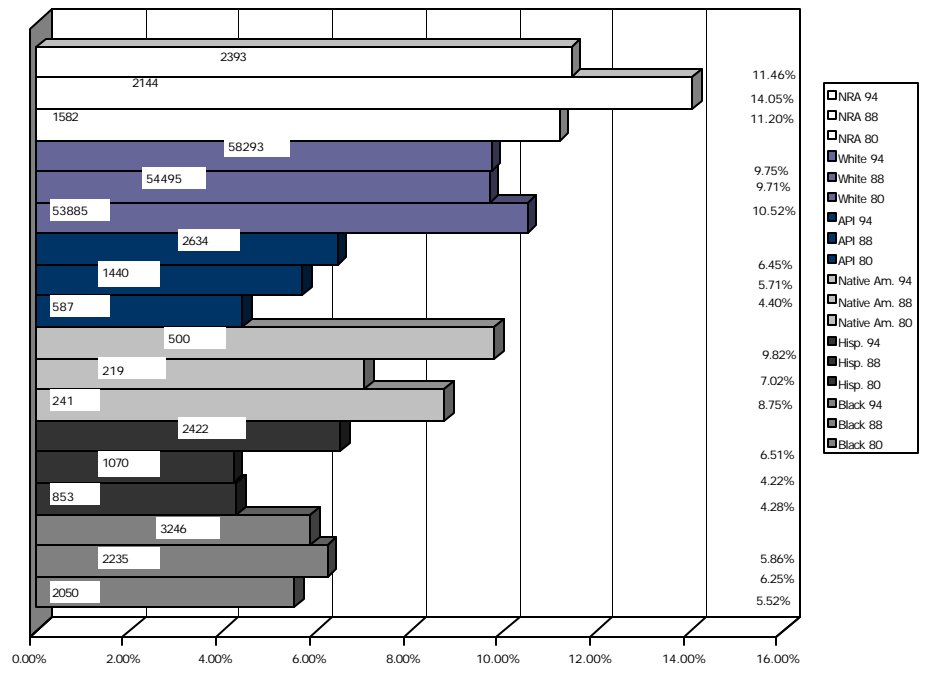
Research I Universities

Public Institutions

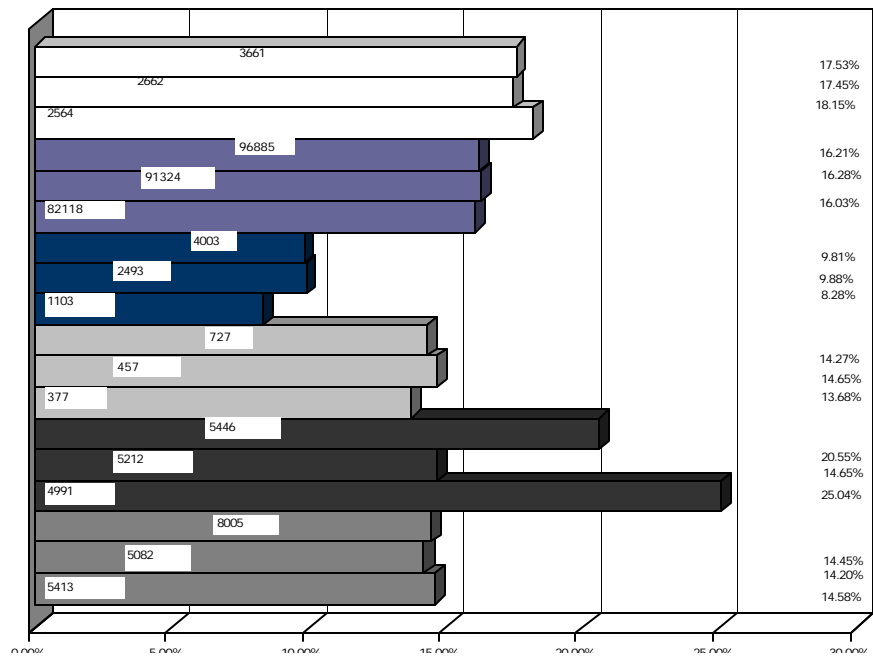
Research II Universities



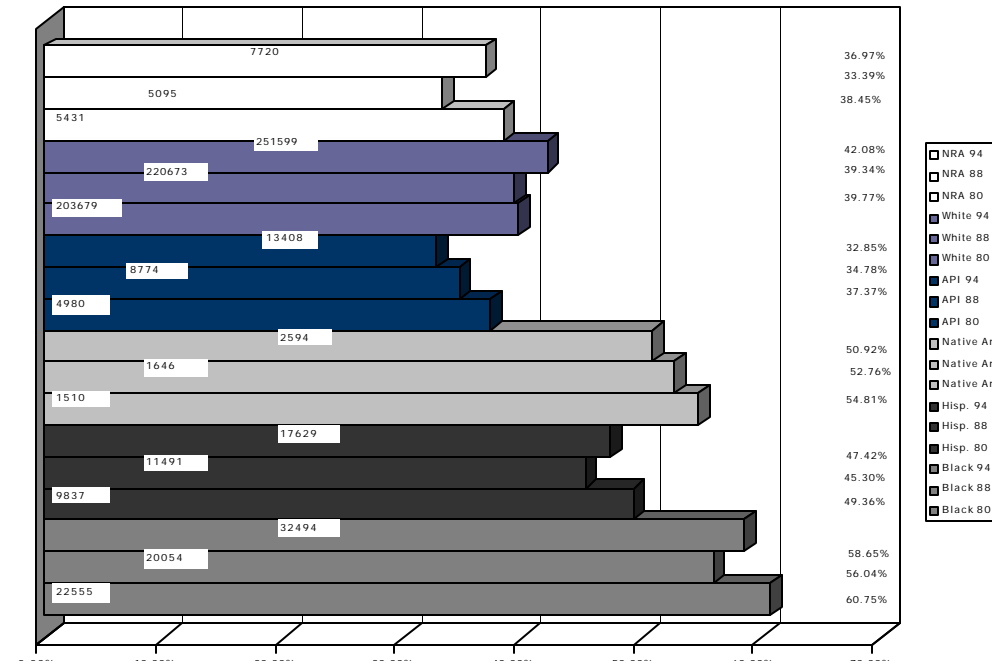
Doctoral Universities



Masters & Bachelors Colleges & Universities



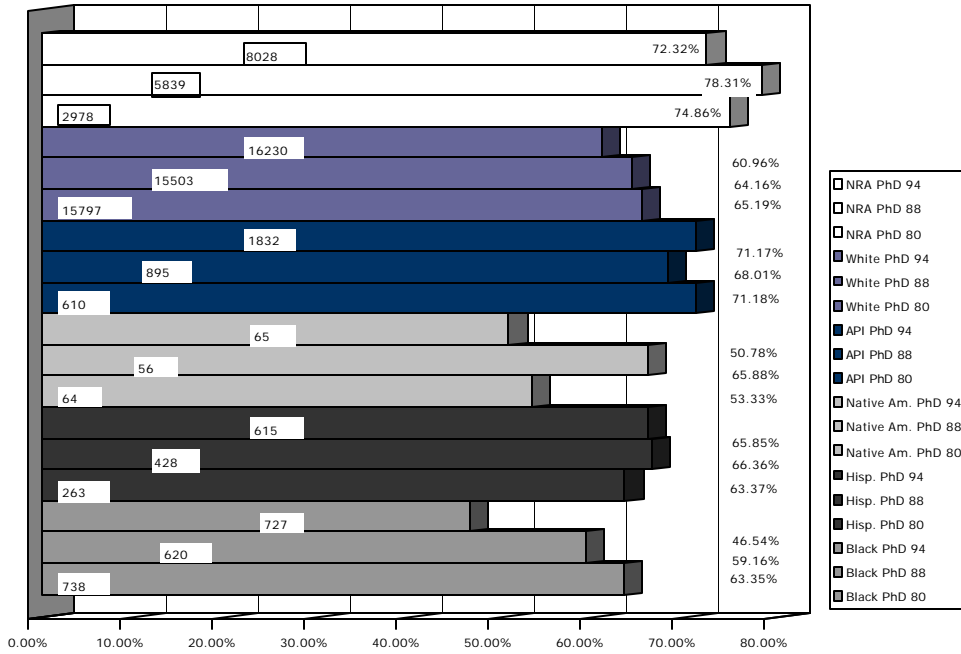
Doctoral Universities



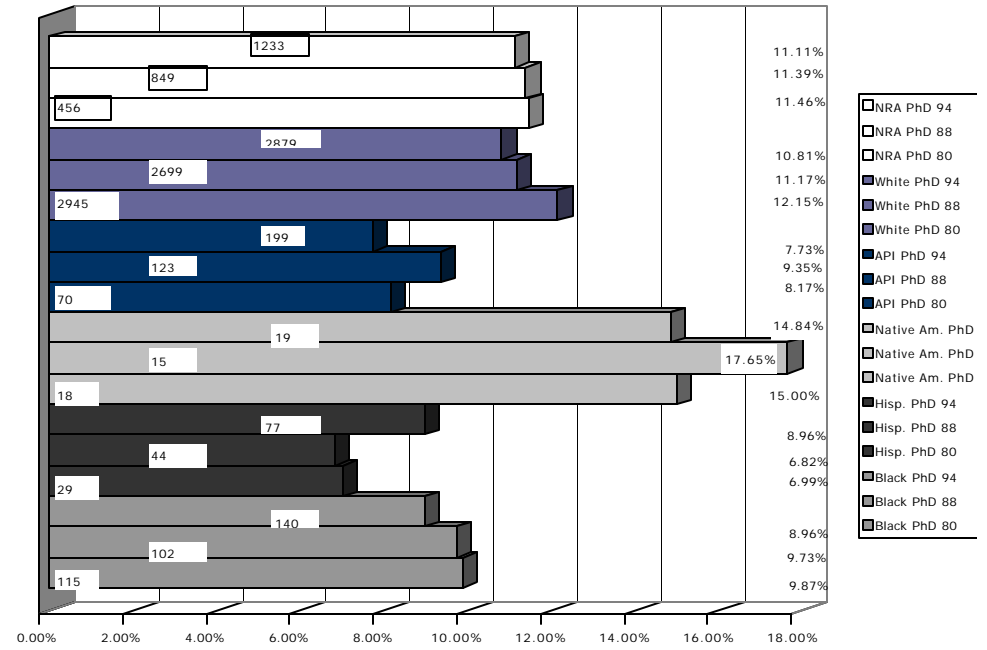
Masters & Bachelors Colleges & Universities

Figure 11: Ph.D. Degrees Awarded by Race and Carnegie Classifications
All Institutions

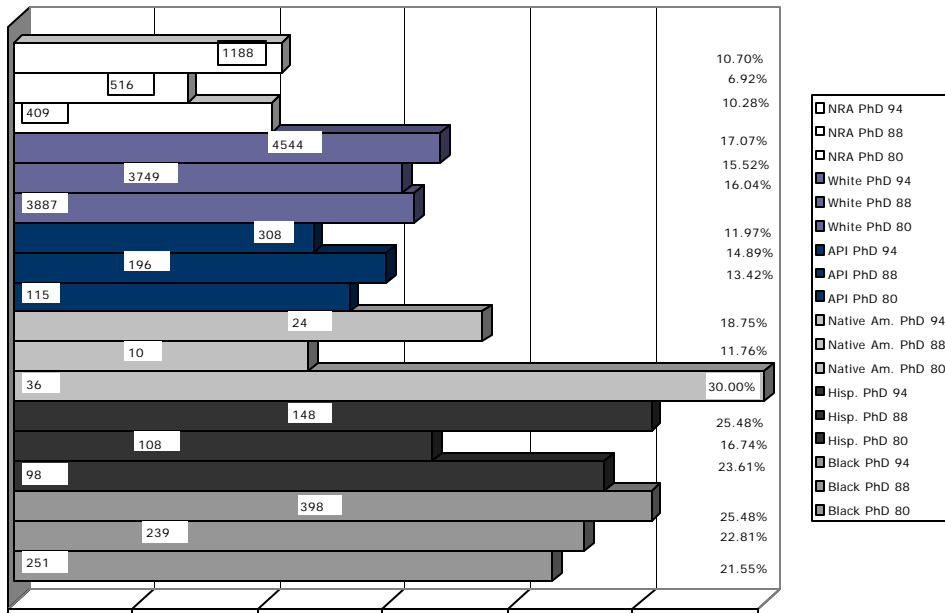
Research I Universities



Research II Universities



Doctoral Universities



Masters & Bachelors Colleges and Universities

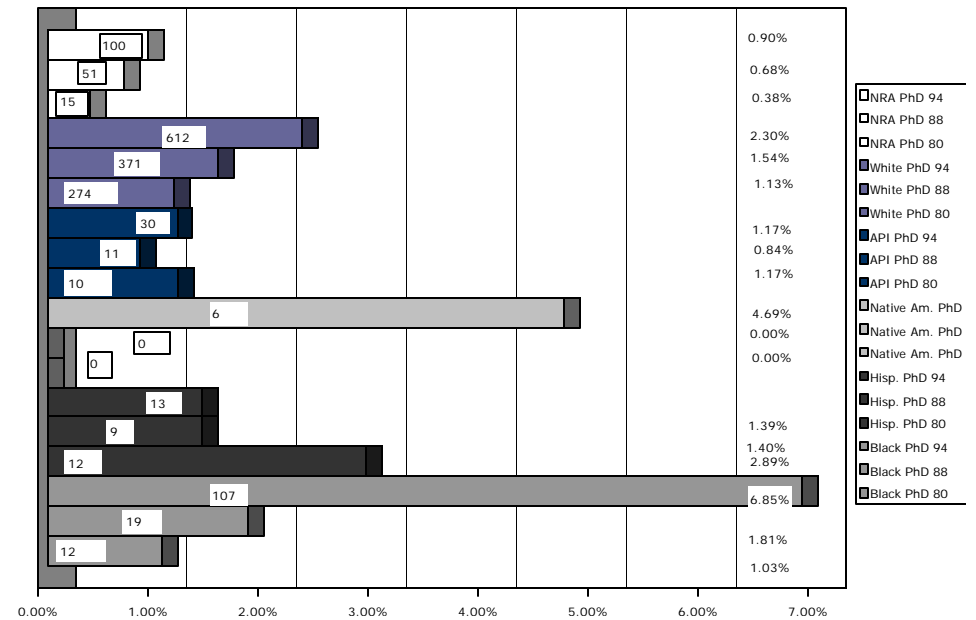
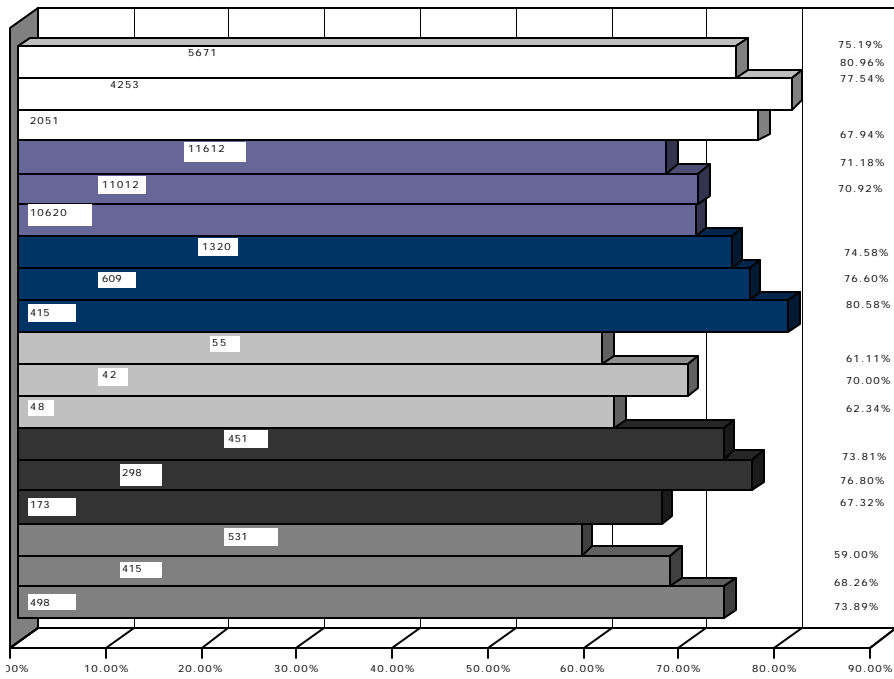
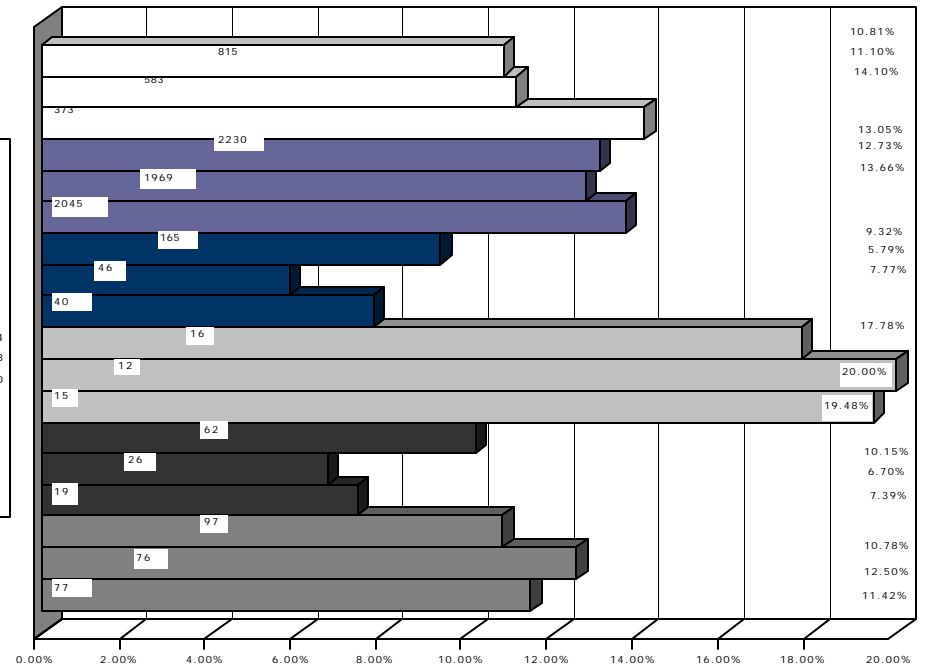


Figure 12: Ph.D. Degrees Awarded by Race and Carnegie Classifications

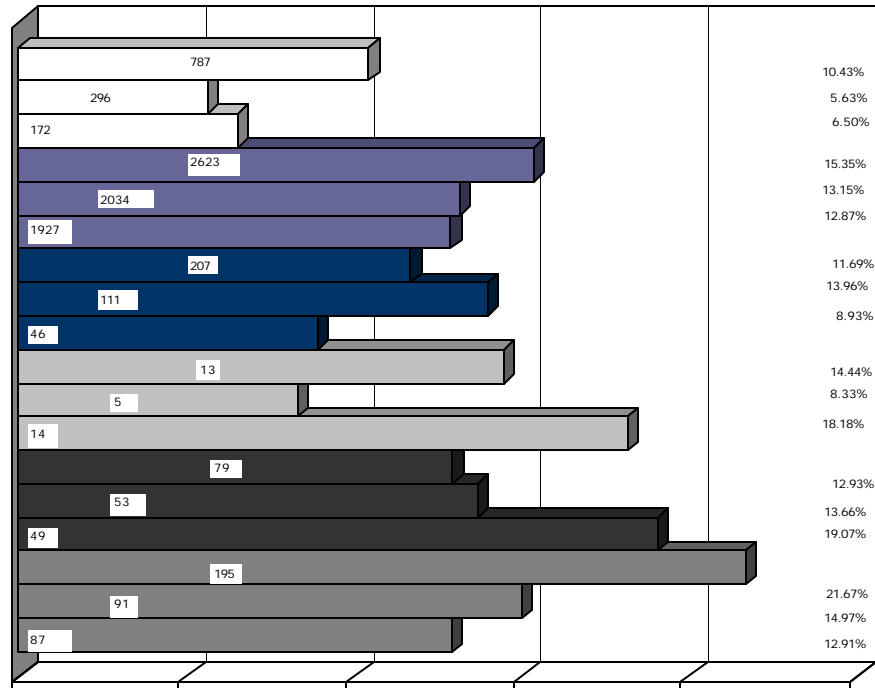
Research I Institutions



Public Institutions



Doctoral Universities



Masters & Bachelors Colleges and Universities

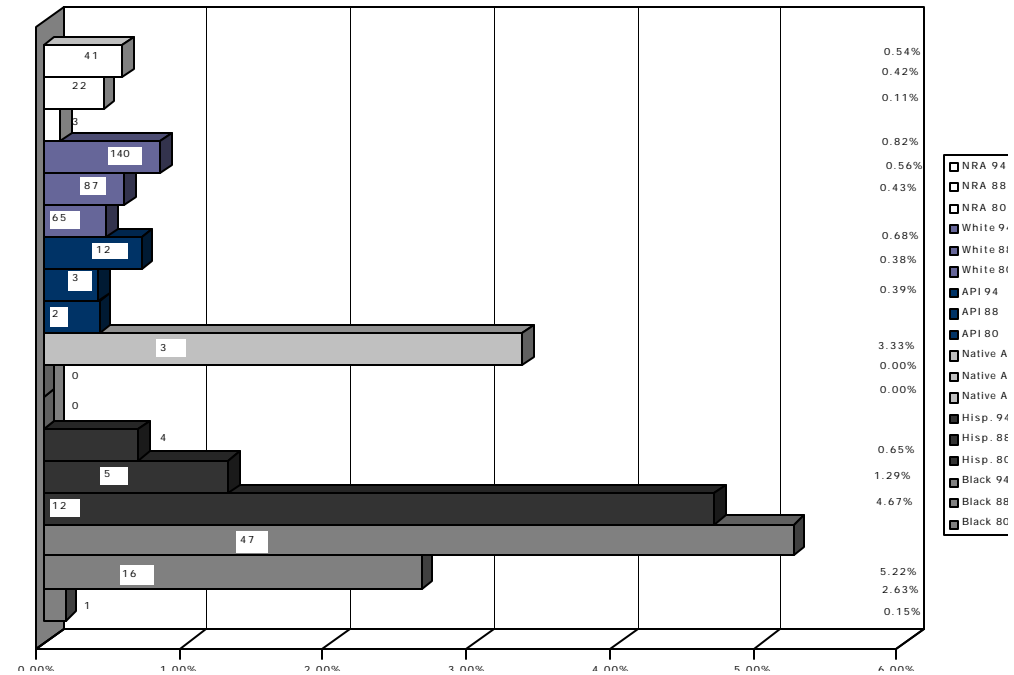
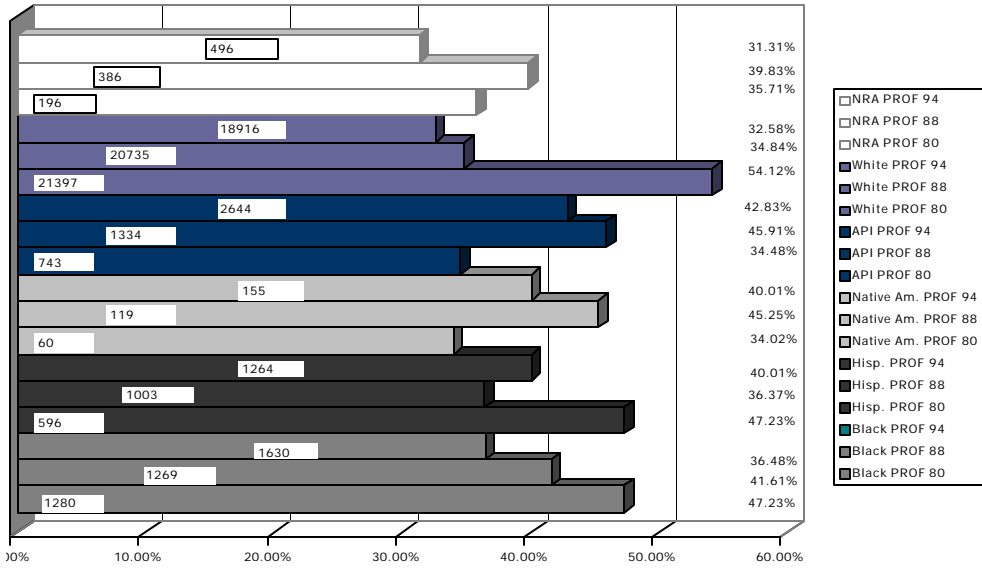
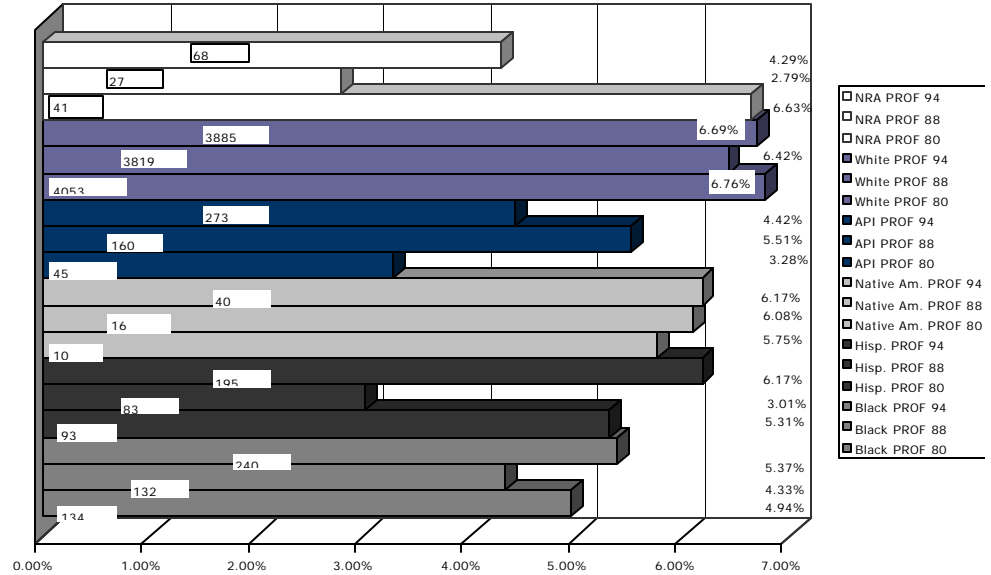


Figure 13: First Professional Degrees Awarded by Race and Carnegie Classifications
All Institutions

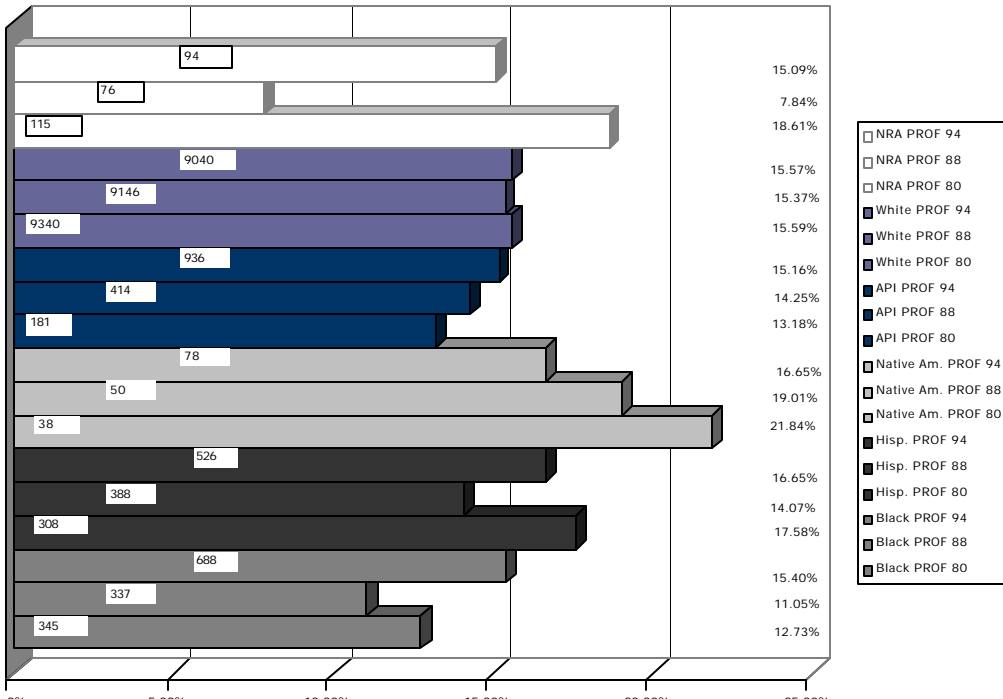
Research I Universities



Research II Universities



Doctoral Universities



Masters & Bachelors Colleges & Universities

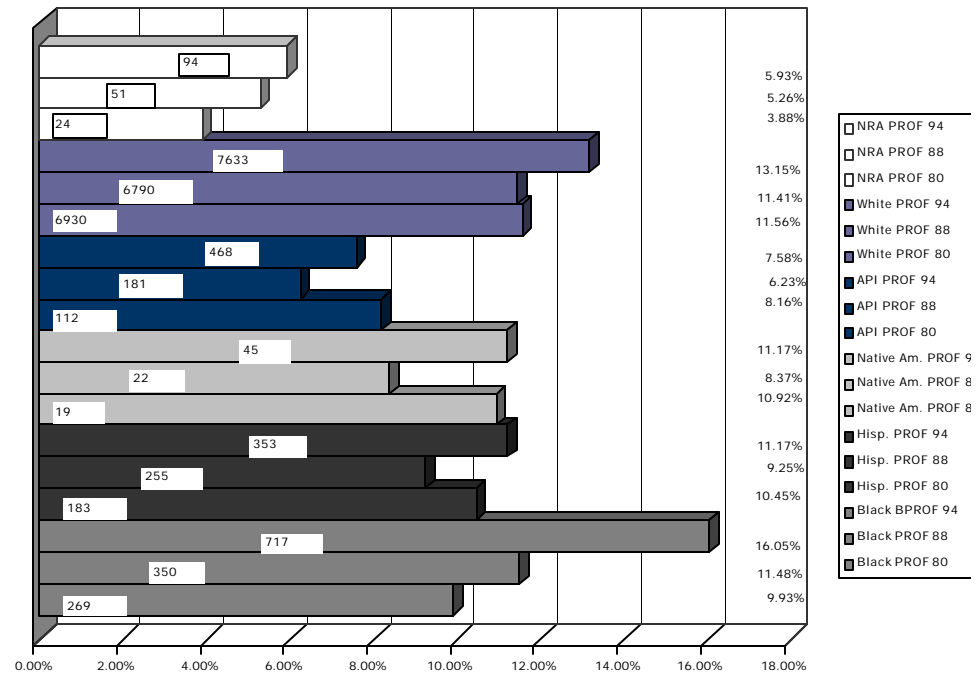
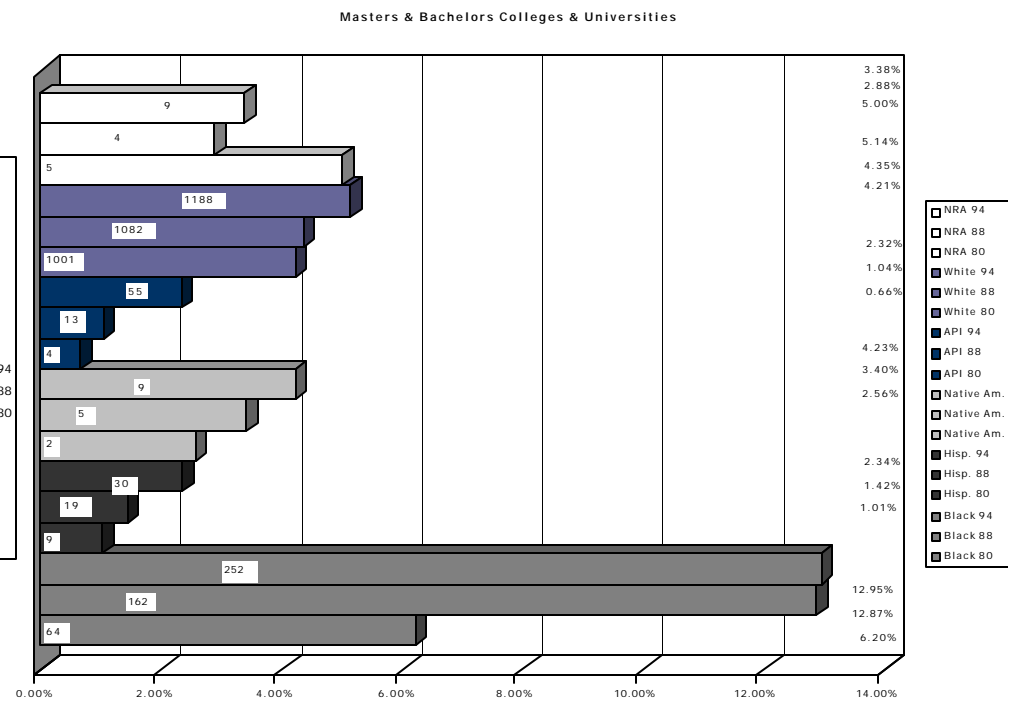
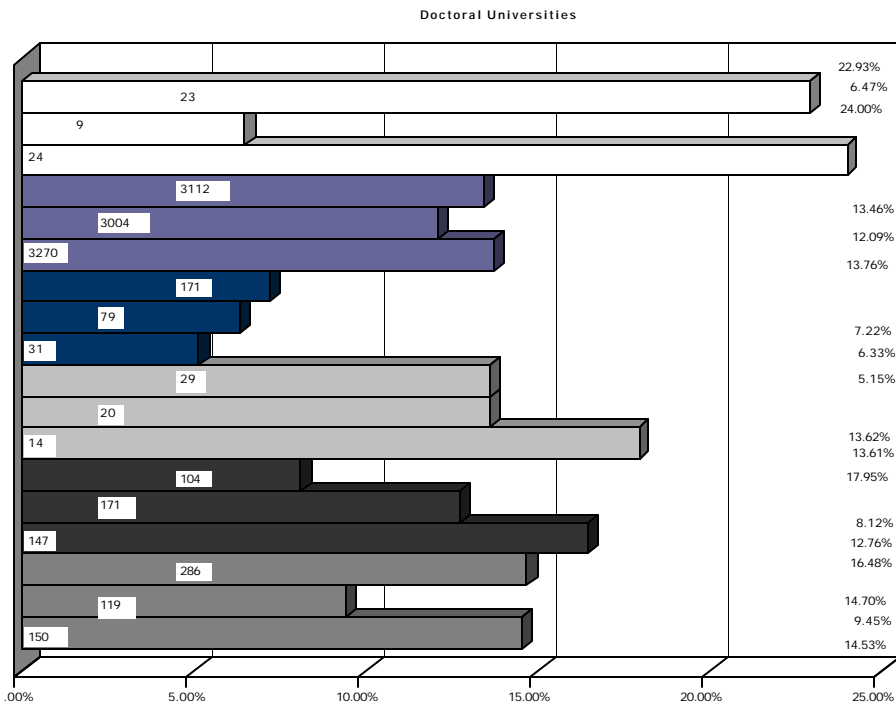
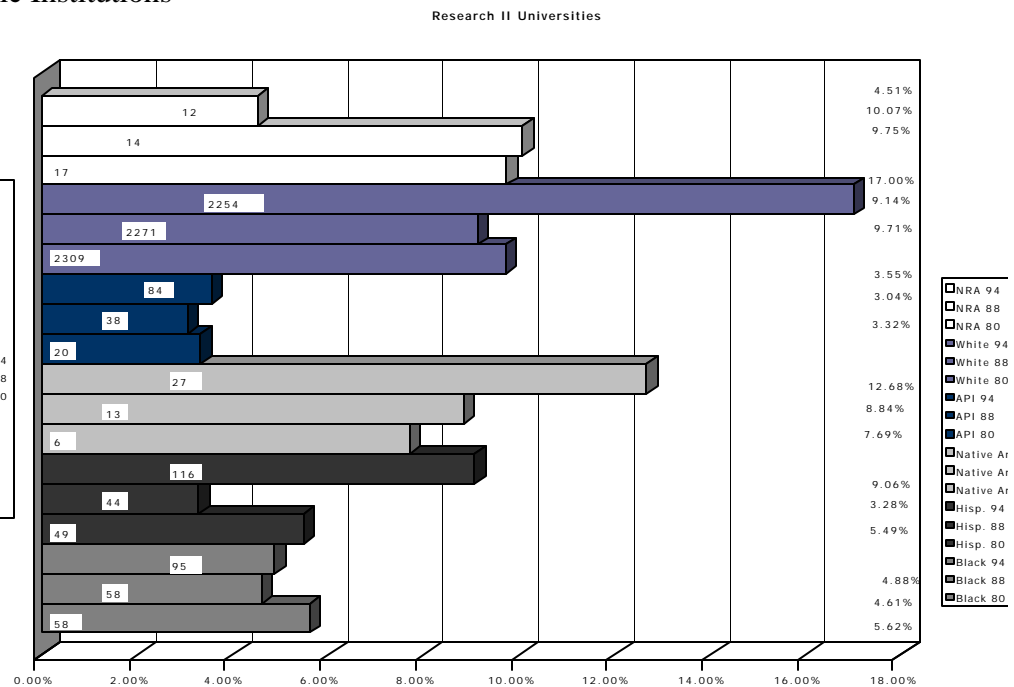
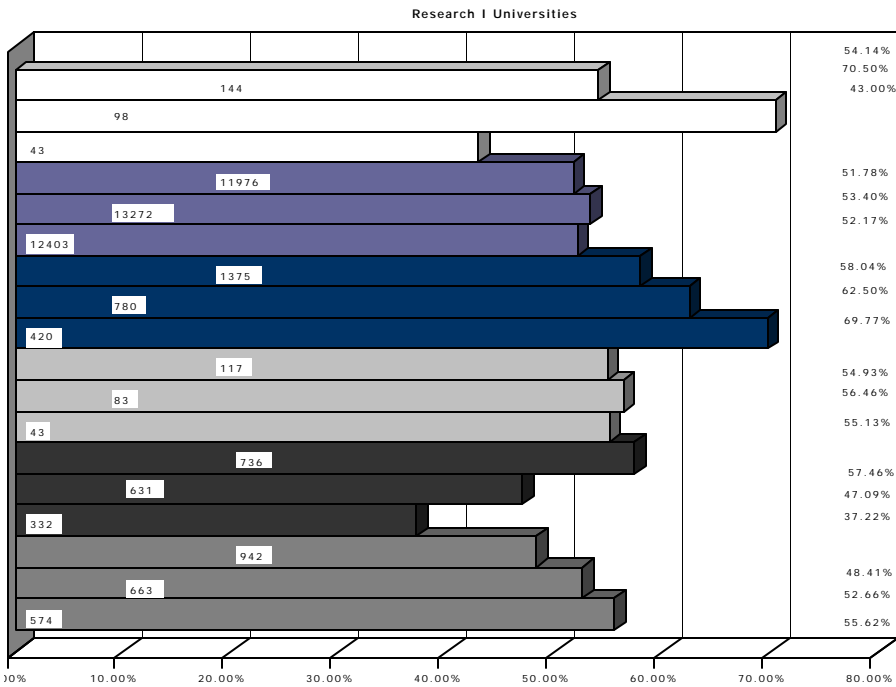


Figure 14: First Professional Degrees Awarded by Race and Carnegie Classifications

Public Institutions



American degree count in the Research I sector ranked them fourth, just ahead of Native Americans, among domestic BA recipients in this sector.

- Asian students earned nearly half (44.4%) of their BA's in the Research I sector. The number of BA's earned by Asians in this sector more than tripled from 1980 to 1994.
- Latino students more than doubled their earned degree total in the Research I sector and increased their sector share from 15% in 1980 to just over 25% in 1994.
- Whites earned a slightly smaller share of their Bas in the Research I sector in 1994 compared to 1980 despite an actual increase of more than 13000 earned degrees.
- The public segment of each sector, in general, makes a greater contribution to earned degrees. The most notable exception is for African American BA recipients in the Masters and Bachelors sector.
- Mainly the Research I and Doctoral sectors confer Ph.D degrees and this holds for all race groups.
- African Americans were second only to Whites among domestic students earning the Ph.D in the Research I sector in 1980 and were third behind Asian recipients by 1994. African American students earned a greater share of their Ph.D's in the Public segment of the Research I sector. In 1994, for example, African Americans held a 47% share in the Research I sector overall but a 73.8% share in the public segment.
- Like the Ph.D, mainly the Research I and Doctoral sectors award the First Professional degree.
- African American recipients of the First Professional degree again lost ground relative to other groups from 1980- to 1994 in terms of the relative increase in the number of First Professional degrees earned in the Research I sector.
- Latino/a students more than doubled the number of First Professional degrees earned in the Research I sector.
- African American and Latino/a students in 1994 remain just over 50% of parity based on their eligibility status for the BA degree while White and Asian students exceed parity. Native Americans appear to be at even parity based on these data. See Chart 4.
- For the Ph.D degree, both African American students and Latino/a students are right at 50% of parity for 1994 based on their eligibility. See Table 12.

These findings confirm the following patterns:

- Despite more than a decade of progress in enrollment and degree attainment, the results show a very uneven pattern of participation and success by higher education sector for different race groups. It appears that African American students have not enjoyed the progress made by Asian, Latino/a, and Native American students to the same degree. The result is that African American students are participating at an increasingly lower rate in the most preferred sector, mainly Research I, in higher education.
- Progress toward parity with respect to either their population share or eligibility share is at a snails pace, if at all, for African American students. This is particularly the case for degree attainment at both the BA and Ph.D levels.

Table 12

Comparison of BA and Ph.D. Degrees
on Proportions of Collage Age and Available Pool by Race and Gender

Race	College Age (18-24) in 1000s 1993			Available Pool (HS grads 18-24) in 1000s 1991			BA. Degrees Awarded 1994-95		
	M	F	Total	M	F	Total	M	F	Total
Black	13.6%	14.9%	14.3%	12.0%	13.6%	12.8%	5.8%	8.4%	7.3%
	1,621	1,828	3,449	1,109	1,364	2,473	31,251	54,605	85,856
Hispanic	11.6%	11.0%	11.3%	8.2%	7.6%	7.9%	5.2%	6.0%	5.7%
	1,380	1,346	2,726	759	762	1,521	28,078	38,971	67,049
Native American	.9%	.7%	.8%	.5%	.6%	.5%	.5%	.6%	.5%
	107	84	190	45	59	104	2,681	3,793	6,474
Asian/Pacific Islander	3.0%	2.9%	2.9%	3.2%	2.9%	3.0%	5.3%	4.8%	5.0%
	360	351	711	291	290	581	28,555	31,101	59,656
White	70.7%	70.4%	70.6%	76.0%	75.3%	75.6%	76.5%	75.4%	75.9%
	8,413	8,618	17,031	7,013	7,555	14,568	409,458	488,328	897,786
Total	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	93.3%	95.2%	94.4%
	11,880	12,227	24,107	9,217	10,030	19,247	500,023	616,798	1,116,821

Race	College Age (20-34) in 1000s 1989			Available Pool (Compl 4 yrs. Coll, 20-34) in 1000s 1989			Ph.D. Degrees Awarded 1994-95		
	M	F	Total	M	F	Total	M	F	Total
Black	11.6%	13.4%	12.5%	6.0%	8.0%	7.0%	2.6%	5.1%	3.6%
	3,473	4,161	7,634	368	497	865	715	910	1,625
Hispanic	9.9%	9.0%	9.5%	4.1%	4.2%	4.1%	1.8%	2.9%	2.2%
	2,963	2,807	5,769	253	259	512	489	525	1,014
Native American	.6%	.6%	.6%	.3%	.2%	.2%	.2%	.4%	.3%
	167	181	348	20	11	31	58	71	129
Asian/Pacific Islander	2.7%	2.7%	2.7%	5.1%	4.7%	4.9%	6.2%	5.0%	5.8%
	8,148	8,468	16,616	317	291	608	1,712	899	2,611
White	75.0%	74.1%	74.6%	84.2%	82.8%	83.5%	53.8%	67.8%	59.3%
	22,406	23,029	45,435	5,192	5,133	10,325	14,801	12,095	26,896
Total	99.9%	99.9%	99.9%	99.7%	99.9%	99.8%	64.6%	81.2%	71.2%

29,823 31,025 60,848 6,150 6,190 12,341 17,775 14,500 32,275

- Enrollment and degree attainment in American Higher education is highest in those sectors that have the highest segregation rates for all students of color. Moreover, levels of segregation are remarkably stable despite substantial changes--lowering--in the ratio of white students to students of color in each sector. Conversely, segregation appears lowest in those sectors that are more selective, research I and Research II universities. Policies that would further move more students of color into the Doctoral and Masters and Bachelors sectors will have the effect of increasing segregation in higher education and thereby substantially reducing the potential for diversity and its commensurate educational benefits.

Discussion And Conclusion

This chapter sought to establish a basis for a clearer dialogue about the state of equity and opportunity in higher education. To do so we have provided an examination of enrollment, segregation and earned degrees for each race category and for selected sectors of higher education. We began with a brief discussion of critical restricting conditions early in the education pipeline. We turn now to the implications of our findings for the continuing debate.

First, there is considerable and mounting evidence that opportunity to learn is a central condition shaping the early short term, and subsequent long term educational experiences of today's youth, especially African American and Latino/a youth. Moreover, there continues to be a broad based public consensus that opportunity to learn ought to be fairly and equitably distributed. There is, at the same time, substantial evidence that opportunity to learn is inequitably distributed, and is shaped, in part, by student race and economic circumstance. The available research further shows that often the confluence of these two factors, occurring together, are especially limiting.

Our review of that research and the tabular data presented here on race, poverty, risk-status and schooling, underscore the need for continued an intensified attention to the role of these factors early in the educational careers of students. This will be essential if we are going to improve the rate at which we increase access to and participation in higher education for African American students. In order to increase their participation in the Research I sector, early and consistent intervention is a necessity. As one example, we show above the effect school racial composition on college going and we show the very different race and poverty composition of schools attended by students differing by race and ethnicity. As still another example, we cite the research on ability grouping and tracking and retention in grade as further widespread schooling practices that are known to disproportionately negatively impact the educational careers of African American and Latino/a students. We must continue the development and implementation of schooling practices that de-track, including the increased use of instructional practices that appropriate.

The results of our analysis of enrollment and earned degree data shows continued disparity negatively impacting African Americans and Latino/a students. While there has been continuing progress in increasing participation for African American students, our results show very little, if any, progress toward achieving parity in enrollment commensurate with their eligibility. Despite have increased their rate of graduation from high school, African American students are actually falling behind relatively. This is especially the case in the Research I sector. Even with what has been shown to be the

affirmative use of race in this sector (Kane, 1998), it is clear that the benefit has not accrued to African American students at a rate that would place their increased participation anywhere close to the rates experienced by Asians and Latino/a students in this sector. In short, the reality is that for African Americans, much remains to be accomplished in order to make real progress.

The examples from the degree data are consistent with the enrollment data: African American students made progress during the 14 year period from 1980 to 1994 but the percentage increases do not compare with the comparable rates for other students of color who saw their levels of earned degrees at the BA and Ph.D. level double and triple in some cases depending on the sector. Equally important, the sector in which substantial increases occurred is a less selective sector where there are higher rates of segregation for all students. Unlike popular beliefs, special attention to race for the purpose of admission is not ubiquitous but instead is rather limited and typically conservatively applied. The enrollment patterns of the different race groups in the Masters and Bachelors sector provides limited indirect evidence of this. In each of the more selective sectors--Research I and Research II--the highest levels of segregation appear to be less than half that for the remaining sectors. Policies that would further limit the use of race will inevitably have the effect of increasing segregation in higher education. The converse is not necessarily the case however. Increasing enrollment in the Research I sector will not necessarily reduce the overall level of segregation nor the level of segregation in this sector which has remained fairly stable for the time points covered here, even when the white-to-other ratios have reduced considerably. Just as Bowen and Bok's findings raise the policy suggestion that, since the retention rates for African American and Latino/a students in the elite/selective schools is so high, it makes sense to make greater investments for minority students attendance in those schools, applying that logic here suggests that we will enhance the potential for diversity more by increasing minority student participation in the Research I sector.

Both the enrollment data and the degree data presented here provide evidence suggesting that the "Unfinished Experiment", to which the 1971 Newman Report referred in describing the participation of minorities in higher education, is still very much a work in progress. The nearly 35 year old effort to increase African American and other minority and poor students participation in higher education that is enshrined in the 1965 Higher Education Act has produced meaningful change but the job is not complete. Both African American and Latino students continue to face large challenges in securing admission to the Research I sector. At the same time, there are models of practices that work--the now altered Banneker Scholarship program; University of Michigan Rackam Scholars program--and are needed.

Failure to pursue these and similar initiatives will seriously restrict access and success for African Americans in the Research I sector. As we have already begun to see, the elimination of the use of race will dramatically alter the overall level of participation of African American and Latino/a students, as in Texas, and/or dramatically reshape the distribution of African American and Latino/a students across the different sectors. Failure to pursue these and similar initiatives is to "turn back" and to turn away from the unfinished effort to correct the known injustices of the past. Efforts to substitute other factors that are less objectionable have been demonstrated to be inadequate to sustain the rates of increase in minority participation across sectors needed to assure the achievement of parity. It is, as the late justice Blackmun stated: "In order to get beyond race, we must first take account of race. There is no other way." It is because we have

been able to take account of race in fashioning education policies since **BROWN** that we have been able to achieve the results reported here.

Footnotes

¹ Carnegie Categories. 1994-95 recoded carnegie categories are used for this research. These most recent categories are used for each year of enrollment and degree data used in this study. Below are the category frequencies for the recoded classifications used in our analyses.

Value Label	Valid Value	Cum Frequency	Percent	Percent	Percent
Research I	1	87	1.8	1.8	1.8
Research II	2	37	.8	.8	2.6
Doctoral	3	110	2.3	2.3	4.9
Master's or Baccalau	4	1129	23.7	23.7	28.6
Associate of Arts	5	1360	28.6	28.6	57.2
Tribal	6	24	.5	.5	57.7
Other	7	596	12.5	12.5	70.2
Uncategorized	8	1420	29.8	29.8	100.0
			-----	-----	-----
	Total	4763	100.0	100.0	
Valid cases	4763	Missing cases	0		

² Johnson’s 1965 speech at Howard University is the source of the often cited metaphor about affirmative action focusing on what must be done in the name of fairness to “level the playing field” for a previously shackled runner, who upon being freed, is participating in a 100 yard dash. Johnson argued that this was not fair, that “something more” needed to be done.

³ Daniel Patrick Moynihan, in a note to then President Richard Nixon, suggested that, because black enrollment in higher education in the US was as great as the total of citizens’ enrolled in Great Britain, “wasn’t it time for a little benign neglect.”

⁴ I make a distinction between poverty and class because it appears that the operationalization of the two is different in the thinking of those who use the terms. On the one hand, there are the deserving poor who, with a helping hand, can be rescued from most of the disadvantages of the absence of economic means. On the other hand, there is an ‘underclass’ which, in the strict sociological sense, is a class unto itself with a unique set of 'oppositional' values that reinforce their separation from full participation. Children from this latter category are apparently more difficult to rescue because of entrenched class values. See "Black students school failure: Acting white"

⁵ Not all colleges and universities are faced with heavy competition for limited spaces. Nettles reports that just about 320 of the four year colleges and universities are faced with this challenge.

⁶ The IPEDS data are available electronically for more recent years at the US Education Department on-line site but these data have not completed the data cleaning process.

⁷ Crossland (1972) used this measure as did the Newman Report (1971)

⁸ The tables presenting the complete distributions for full time enrolment by race and Carnegie category for each year reported here are available in Appendix 1.

⁹ See note 1 above.

Chapter 3

Social Psychological Evidence on Race and Racism

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The issue of diversity is central to the philosophy and mission of higher education. The purpose of higher education is not only to further the achievement and advancement of individuals within society, but also to further the economic and cultural growth of society as well. Institutions of higher education are uniquely situated to promote the values, norms, and ideals of society. American society was founded on principles of social equality, and today there is widespread support for racial equality and integration. It is through the process of racial socialization that these American ideals of racial equality and integration are transmitted. Institutions of higher education are powerful agents for racial socialization. In a diverse society, institutions of higher education have the opportunity to educate diverse groups of students and to incorporate the diversity of perspectives offered by these students into the curriculum. They also have the opportunity to create positive intergroup climates within which diverse groups of students can interact, learn from one another, and develop positive attitudes toward one another. The benefits of diversity impact not only the individuals on college campuses, but the society within which we live as well. If President Clinton is successful in his efforts to extend educational opportunity to all Americans and make at least two years of college as universal as a high school diploma is now, the role of higher education as a positive agent for improving racial dynamics both within and beyond the university environment will become even more important.

As institutions of higher education have become increasingly diverse, social scientists have become more intimately familiar with the issue of diversity and more personally invested in its resolution. Furthermore, as government officials and policy makers begin to rely more heavily on the knowledge base generated by social scientists, social scientists become ideally positioned to address this pressing social issue. Social scientists need to focus on the diversity issue in the 1990s with as much vigor as they addressed the issue of school desegregation in the Social Science Statement that was appended to the plaintiffs' briefs in the 1954 *Brown vs. Board of Education* case. In doing so, social scientists must promote the need for diversity in higher education by linking it to real world problems beyond the university environment.

Racial dynamics on college campuses are influenced by the same racial

stereotypes and group-based power differentials that operate in the real world. A variety of theoretical perspectives have been developed to understand the complexity of race relations in the U.S. Research on racial dynamics spans across many social science disciplines, including anthropology, education, sociology, and organizational and social psychology. Each of these fields offers a unique perspective on the dynamics of race relations. This chapter will use the social psychological research literature as a prime example of how the issue of diversity in higher education can be understood using the lens of social science.

Two critical questions in the policy debate regarding diversity in higher education are whether race matters in everyday life and whether race should matter in institutional policies. The first is an empirical question; the second, a prescriptive judgment. One cannot decide whether race should matter in policy decisions without first recognizing the many ways in which race matters in society. Social psychological research is rich with examples of how race adversely affects social perceptions, attitudes, and behaviors. This chapter will provide an overview of this research literature and demonstrate its relevance to the issue of diversity in higher education.

Racial Attitudes

As we look back over the years of the post-civil rights era, we see a positive trend in the self-reported racial attitudes of white Americans, especially in their attitudes toward African Americans. The demise of legalized racial segregation and discrimination was followed by a sharp decline in blatant, “old-fashioned” racism which centered on the notion of biologically-based black racial inferiority (McConahay, 1986). Today, national surveys show that white Americans overwhelmingly endorse the principles of racial equality and integration (Schuman, Steeh, & Bobo, 1985). This positive trend is also reflected in surveys of white college students, which show a steady decline in negative characterizations of blacks over the last 60 years (Dovidio & Gaertner, 1996). However, many researchers argue that while the fundamental norms with regard to race have changed, underlying negative attitudes toward African Americans and other minority groups persist, albeit in a new guise. While most whites no longer blatantly oppose the ideals of racial equality and integration, many show subtle and often unconscious biases toward members of minority ethnic groups. These newer forms of unintentional racial biases are exhibited by many whites who, on a conscious level, endorse egalitarian values and believe themselves to be nonprejudiced. These biases persist inconspicuously but can have grave effects on social perceptions, attitudes, and behaviors. Three contemporary approaches to racial attitudes highlight different forms of racial bias: aversive, symbolic, and modern.

Aversive racial attitudes

Gaertner and Dovidio (1986) propose that many people harbor negative feelings about blacks (or members of other minority groups) on an unconscious level. These biased judgments against blacks result from childhood socialization of the dominant racial biases in society and from the typical way in which individuals categorize people into social groups rather than expend limited cognitive resources to judge each person individually. Aversive racism refers to the unintentional expression of these anti-black feelings by people who sincerely endorse, on a conscious level, egalitarian values and principles. Rather than reflecting bigotry or hatred, the anti-black feelings held by aversive racists reflect fear and discomfort; their discriminatory behavior toward blacks is characterized more by avoidance than by intentional hostility.

Unlike more blatant prejudice which is expressed directly against people because

of their race, aversive racism is more likely to be expressed when it can be justified on the basis of some factor other than race; in this way aversive racists can maintain their nonprejudiced self-image. For example, in a study on personnel selection (Dovidio, 1995; reported in Dovidio & Gaertner, 1996), black and white job applicants were treated the same when the information provided about them was either uniformly positive or uniformly negative. However, white applicants were favored over black applicants when a combination of positive and negative information was provided about the candidates. That is, aversive racism was exhibited when the white evaluators were given more ambiguous information about the applicants; in this case, the evaluators were able to attribute their unfavorable evaluation of black applicants to the ambiguous information they received about the candidates rather than to their race.

Aversive racism has also been shown to influence ostensibly “colorblind” college admissions decisions. In a related study, white participants evaluated white and black applicants for university admission (Kline & Dovidio, 1982; reported in Dovidio & Gaertner, 1996). The credentials of the applicants were systematically manipulated to produce poorly, moderately, or highly qualified applicants. Discrimination against the black applicant was greatest when the qualifications were high: While applicants of both races were evaluated very positively under these conditions, the white applicant was judged even more favorably than the black applicant. Bias was even more pronounced when evaluations were made on items less directly related to the information provided in the application. That is, when evaluators took less relevant information into account in their admissions decisions, they were even more biased against blacks. Therefore, even when equal access to employment or educational opportunities is provided in principle, unintentional racial biases may undermine equal outcomes in practice.

Two other studies have demonstrated the impact of aversive racism on whites’ opposition to affirmative action (Dovidio, Gaertner, & Murrell, 1994; Murrell et al., 1994). Consistent with the aversive racism framework, whites were more opposed to affirmative action for blacks than for other groups (Native Americans and handicapped persons in the Dovidio et al. study and elderly and handicapped persons in the Murrell et al. study), particularly when their opposition could be justified on the basis of unfair procedures (a factor other than race). If affirmative action opposition was truly motivated by non-racial principles of fairness rather than by aversive racial attitudes, then whites would equally oppose unfair policies designed to help all groups; however, they showed greater opposition to unfair policies designed to help blacks. Racial attitudes may therefore influence attitudes toward affirmative action. At the same time, however, it is important to point out that these findings do not imply that all opposition to affirmative action is motivated by racial attitudes. Other factors need to be considered. Before moving on to a discussion of other possible influences on attitudes toward affirmative action, two additional forms of contemporary racial attitudes will be introduced.

Symbolic and modern racial attitudes

Symbolic racism was defined by Sears (1988, p. 56) as “a blend of anti-Black affect and the kind of traditional American moral values embodied in the Protestant Ethic.” According to the symbolic racism perspective, many whites acquire both traditional American values and negative feelings about blacks through early childhood socialization. Symbolic racists express anti-black feelings in adulthood through beliefs that blacks are violating the traditional values that they hold dear. The perceived failure of blacks to uphold traditional American values like individualism, hard work, and self-reliance provides symbolic racists with the rationalization they need for opposing redistributive social policies like affirmative action. Consistent with this approach, previous research has found that, among whites, higher levels of symbolic racism are

associated with greater opposition to equal opportunity for blacks, greater opposition to federal assistance for blacks, and greater opposition to affirmative action for blacks (Sears, van Laar, Carrillo, & Kosterman, 1997). In fact, symbolic racism is even more predictive of whites' opposition to affirmative action for blacks than are political partisanship and non-racial values like individualism and morality. When policy decisions are based more on racial attitudes than on non-racial principles, they directly contradict national ideals of equality and fairness.

Modern racism is similar in form to symbolic racism; both perspectives argue that contemporary racial attitudes involve negative affect attached early in life to blacks. According to McConahay (1986), modern racists do not consider themselves to be racists because they don't hold old-fashioned racist attitudes and they don't think their traditional values are inspired by racial beliefs; rather, they think their views reflect empirical facts. Like symbolic racists, however, modern racists have been found to discriminate against members of minority groups in subtle, rationalizable ways (McConahay, 1986). Because opposition to redistributive social policies like affirmative action is couched by modern and symbolic racists in terms of blacks' violation of traditional American values rather than blatant prejudice against blacks, these contemporary forms of racial attitudes are more subtle and insidious, but their impact can be as severe as that of old-fashioned racial attitudes.

What all three of the aversive, symbolic, and modern racism perspectives have in common is the notion that racism is deeply embedded in the culture in which we live. Although racism has changed in form from its traditional expression in direct and overt ways to its contemporary expression in indirect and subtle ways, racism is still part of U.S. culture. According to the cultural racism perspective, "the cumulative effects of a racialized worldview ... are suffused throughout the culture via institutional structures, ideological beliefs, and personal everyday actions of people in the culture, and these effects are passed on from generation to generation" (Jones, 1997, p. 472). As the cultural racism perspective implies, racism can occur not only at the level of the individual, but at the level of the institution as well.

Institutional racism

Institutional racism refers to "those established laws, customs, and practices which systematically reflect and produce racial inequities in American society" (Jones, 1997, p. 438). As Jones points out, when institutional practices or policies systematically create disadvantage for racial minority groups and their members, it doesn't really matter what any specific person's intentions were. From this perspective, remedying institutional racism does not involve changing individuals' racist intentions as much as it involves restructuring institutional practices in order to increase equality of opportunity. Evidence of institutional racism has been found in several different domains, including the criminal justice system, banking industry (e.g., housing loans), employment sector, educational system, and the media (see Jones, 1997). For example, members of minority groups have been found to face more severe legal sanctions than whites (e.g., more arrests, more convictions, and harsher prison sentences), even after taking into account all other legally relevant factors such as type and severity of crime and prior criminal record (Sidanius, Levin, & Pratto, 1998). An interaction between race and gender has also been found, indicating that black men experience more unfair treatment by institutions (e.g., police) than black women (Gallup, 1997; for a review, see Sidanius & Pratto, in press). Despite the difficulty of disentangling race from class (given that racial minorities have disproportionately low socioeconomic standing), racial inequalities are not reducible to class inequalities: disparities in racial outcomes persist even when differences in socioeconomic standing are taken into account (Sidanius & Pratto, in press). These

examples of institutional racism demonstrate the powerful ways in which race structures the society in which we live.

Social Psychological Theories of Racial Conflict

Given the pervasiveness of racism in our culture, four social psychological theories examine the individual and intergroup processes that drive racial conflict: realistic group conflict theory, social identity theory, optimal distinctiveness theory, and social dominance theory (see Table 1 for a comparison of the processes driving racial conflict proposed by these theories).

Realistic group conflict theory

According to realistic group conflict theory (Bobo, 1983, 1988), group conflict and ethnocentric attitudes and behaviors are primarily functions of realistic competition between groups over scarce resources and perceived threats to group position. Whites, as members of the dominant group in the United States, develop attitudes and beliefs that defend their privileged, hegemonic social position. The dominant group seeks to legitimize the current inequalities through these group-interested ideologies and to perpetuate them by engaging in discriminatory behavior. In this light, whites' opposition to redistributive social policies like affirmative action is viewed not as a reflection of negative feelings or beliefs about minority groups per se, but rather as a reflection of defense of group privilege in a conflict over valued social resources, status, and power. From this perspective, the affirmative action debate is one about the place racial groups should occupy in American society. Consistent with realistic group conflict predictions, Bobo (1997) found that the more whites perceive that the advancement of blacks (in terms of employment and housing opportunities, political influence, and economics) comes at the expense of the advancement of members of other groups, the more they perceive that affirmative action for blacks has negative effects.

Social identity theory

According to social identity theory (Tajfel & Turner, 1986), individuals hold conceptualizations of the self at both an individual and a group level. Personal identity refers to those aspects of the self that differentiate one individual from others within a given social context. Social identity refers to those aspects of the self that relate to group membership, or that are defined in terms of the groups to which one belongs. When group boundaries are made salient, individuals categorize people as members of their own group (ingroup) or as members of another group (outgroup), and start to compare their group to other groups on the basis of some evaluative criteria. Individuals are motivated to achieve and maintain a positive image of their ingroup. One way they may do so is by comparing their ingroup with outgroups perceived to be inferior on some evaluative dimension. This preference or favoritism places their ingroup at an advantage relative to other outgroups. When there is a power differential, ingroup favoritism can have dramatic implications for the unequal distribution of economic and social resources. For example, social identities based on race will trigger evaluative comparisons with other racial groups. Individuals are motivated to achieve a positive social identity by favoring their own racial group over other racial groups. This ingroup favoritism may translate into resistance to affirmative action policies when these policies are perceived to benefit members of other racial groups at the expense of one's own racial group. Members of groups with greater access to resources may thus oppose redistributive social policies like affirmative action because such policies threaten to reverse the favorable evaluation of their group relative to other groups.

Table 1

Comparison of the Processes Driving Racial Conflict Proposed by Four Social Psychological Theories

Theory	Primary Force Driving Racial Conflict
Realistic group conflict theory	Competition between groups over scarce resources ; perceived threats to group position
Social identity theory	Individuals' motivation to achieve a positive so identity by favoring their own group over other group
Optimal distinctiveness theory	Individuals' motivation to identify with optima distinct groups, i.e., those that are large enough satisfy an individual's need for belonging and inclus and small enough to satisfy the need for distinctiveness and differentiation
Social dominance theory	Individuals' desires for group inequality and domination of "inferior" groups by "superior" groups

Optimal distinctiveness theory

Optimal distinctiveness theory (Brewer, 1991) is an extension of social identity theory that views social identity as a compromise between opposing needs for similarity to others and differentiation from others. Social identification and group loyalty will be strongest for groups that are optimally distinct, i.e., those that are large enough to satisfy an individual's need for belonging and inclusion and small enough to satisfy the need for distinctiveness and differentiation. Groups that are in the numerical minority are more likely to be optimally distinct because they offer both a sense of being similar to fellow minority group members and a sense of being different from members of the majority group; minority group members are therefore more likely to exhibit strong ingroup identity and loyalty. The greater sense of belonging found among minority group members may explain the benefits derived from participation in racial/ethnic student organizations and minority support programs (Hurtado, Dey, & Trevino, 1994). Membership in the majority group of whites, on the other hand, is too inclusive an identity to stimulate feelings of belonging. From this perspective, members of the majority group are more inclined to identify themselves in individual terms rather than as part of an overly inclusive category (Tajfel, 1978). Since whites are less likely to identify themselves in terms of their racial group membership, they may be more opposed to affirmative action policies because such policies require the identification of people by race.

Social dominance theory

According to social dominance theory (Sidanius, 1993; Sidanius & Pratto, in press), individuals differ in the degree to which they desire unequal status relations between groups in society. Individuals who want groups at the bottom of the social hierarchy to be kept down and dominated by groups at the top of the hierarchy endorse a variety of ideologies which justify greater levels of social inequality, such as racism, individualism, and the Protestant work ethic. Racist beliefs reinforce the social hierarchy because they portray racial-status differences as being legitimately based on inherent differences in group members' ability and potential. Other ideologies like individualism and the Protestant work ethic lack specific racial content but still function to reinforce racial inequality because they attribute the lower status of blacks to lack of ability and lack of motivation. Individuals who desire group-based dominance are expected to show more support for ideologies like racism, individualism, and the Protestant work ethic, and their support for these "system-justifying" ideologies is expected to translate into greater opposition to redistributive social policies like affirmative action. >From this perspective, then, the primary driving force behind opposition to affirmative action is individuals' desires for group inequality and the domination of "inferior" groups by "superior" groups. This approach directly contradicts claims that opposition to affirmative action is rooted in "principled" adherence to ideologies like individualism and the Protestant work ethic. Rather, endorsement of these ideologies is viewed as a way for individuals who want to maintain the social hierarchy to justify their racially motivated opposition to affirmative action. Consistent with social dominance predictions, several studies have found that opposition to affirmative action is driven in large part by desires for group-based dominance (Sidanius, Levin, Rabinowitz, & Federico, in press; Sidanius, Pratto, & Bobo, 1996; Singh, Sidanius, Hetts, & Federico, 1997).

In sum, given the current racial status hierarchy, "colorblindness" will perpetuate the racial status quo due to the operation of unintentional racial biases, group identity processes, group competition, and group dominance motives. These processes contribute to the unequal treatment of minority groups and generate opposition to redistributive

social policies designed to ameliorate their condition. Social psychological research therefore suggests that a race-neutral or colorblind approach is unfair because it ignores the many ways in which race matters in society. A mound of social science evidence thus supports Justice Harry Blackmun’s opinion in the Bakke case that “in order to get beyond racism, we must first take account of race. There is no other way. And in order to treat some persons equally, we must treat them differently” (438 U.S. 407, 1978).

Fairness Beliefs

As Justice Blackmun’s opinion indicates, responses to affirmative action reflect underlying notions of fairness. For some, fairness requires treating people as individuals, and for others, fairness requires taking into account the collective representations that matter in society. Ferdman (1997) frames this fairness debate in terms of a distinction between the “individualistic perspective” and the “group perspective.” Proponents of the individualistic perspective argue that it is unfair to pay attention to ethnicity because ethnic group memberships should not influence the opportunities and outcomes of individuals in society. Proponents of the group perspective, on the other hand, argue that it is unfair not to take ethnicity into account because of the power differentials that exist between ethnic groups in society. According to this latter perspective, ignoring ethnic group membership obscures the significant ways in which these power differentials influence the opportunities and outcomes of members of different ethnic groups.

Individualistic perspective

The individualistic view is deeply rooted in American values of meritocracy. A meritocratic reward structure is one in which advancement is determined by individual ability and talent. From the individualistic perspective, selection procedures and outcomes are fair when all individuals, regardless of ethnicity, are judged by the same established criteria of competence. Individual skills and achievements are viewed as legitimate criteria by which to judge individual competence because they are thought to be objective and orthogonal to ascribed characteristics like race. Because race is considered to be irrelevant to judgments of individual competence, proponents of the individualistic perspective argue that race should not be taken into account in merit-based selection procedures.

The problem with this view of meritocracy is, as Haney and Hurtado (1994, p. 239) argue, that the very concept of “merit” and the associated notions of “ability” and “qualification” are socially constructed categories. How we define, measure, and value these concepts, as well as the specific manner in which they are applied in any given setting, are not determined by objective criteria, but rather by subjective criteria established by the dominant culture. As Gumperz (1983, p. 117) argues, “failure to understand that these criteria are themselves necessarily culture and convention bound, and that the conditions under which we live prevent many individuals from learning what these conventions are, leads to a vicious cycle of miscommunication, stereotyping, and indirect discrimination which is difficult to break.” Proponents of the individualistic perspective support notions of equity at the individual level; that is, if individuals receive rewards in proportion to their inputs, then equity exists and inequality between individuals with different inputs is justified. However, as Ferdman (1997, p. 201) comments, “equity at the group level can only exist when alternative cultural definitions of competence are given equal weight.” That is, because definitions of “input” are socially constructed and culture bound, notions of equity at the individual level disadvantage members of cultural groups for whom “input” is defined differently, thereby precluding equity at the group level.

Group perspective

An alternative system of allocating opportunities and rewards is advocated by the group perspective (Ferdman, 1997). From this view, a fair system is one in which all groups are afforded equal opportunity. In order to ensure equal opportunity at the group level, group membership must be taken into account in comparisons between individuals because group-based power differentials and the long history of discrimination against minority groups have restricted minority access to the vital resources necessary to compete along individualistic lines. According to the group perspective, using the same standards to judge individuals from majority and minority groups is unfair because differences in power prevent the two groups from having equal opportunity.

Power differentials also reinforce negative stereotypes about less powerful minority groups. One domain in which negative stereotypes about African Americans and Latinos are prevalent is academic performance: black and Latino students face group stereotypes of poor academic performance. Claude Steele and his colleagues (Steele, 1997; Steele & Aronson, 1995) have proposed a theory of stereotype threat that explains the reactions of individuals who face the predicament of stereotypical expectations of low performance. When an individual is threatened by a negative stereotype about one's group, the individual becomes fearful that he or she will confirm or be judged by the stereotype, and may reject the setting in which the threat occurs. These two reactions to stereotype threat -- anxiety and disidentification with the academic domain -- result in reduced effort, lower academic performance, and rejection of academic performance as an indication of self-worth. It is important to point out that the threat is posed by group ability stereotypes, not beliefs about one's own ability. The threat of negative group stereotypes can actually impair academic performance so that individuals perform at a level below their true ability. If merit is tied to performance in a domain in which minority groups suffer from the threat of negative stereotypes, then ignoring race in merit-based selection procedures unfairly disadvantages members of these minority groups.

Eberhardt and Fiske (1994) take the argument in favor of the group perspective one step further by asserting that existing power differentials not only disadvantage minority groups, but also privilege majority groups because they create the illusion that the qualifications of majority group members are more merit-based than are those of minority group members. That is, the authors argue that, contrary to popular belief, merit-based selection is not independent of group membership. Rather, absent an explicit affirmative action policy targeting minority groups, members of majority groups are conferred a competitive advantage by the implicit assumption that their achievements are more merit-based than are those of minority group members.

As it impacts attitudes toward affirmative action, this debate between the individualistic and group perspectives must be placed in the context of normative beliefs about fairness. The dominant ideology in the United States is described by Kluegel and Smith (1986) as a belief in widespread opportunity, individual responsibility for achievement, and the equity principle (equity at the individual level). According to Clayton and Tangri (1989), affirmative action policies are perceived to violate two basic principles underlying the dominant ideology of individual achievement: equal access to opportunities and equitable assignment of rewards based on individual merit rather than on group membership. The authors argue that "it is this appearance of incompatibility with equality of opportunity and equity of rewards which has led some to conclude that affirmative action policies are fundamentally unfair" (Clayton & Tangri, 1989, p. 177). Contrary to appearances, however, Clayton and Tangri (1989) argue that affirmative action is in fact a fair policy, in that it meets or exceeds normal standards of distributive

justice (fairness of the distribution of benefits), procedural justice (fairness of the procedures that guide decision-making), and macrojustice (fairness of the distribution of outcomes within a society).

Distributive justice

According to the equity principle of distributive justice, a relationship is equitable when all individuals receive the same relative outcomes in proportion to their inputs. In order for members of all ethnic groups to receive equitable outcomes in terms of college admissions decisions, the “inputs” of members of all groups must be judged by the same standard. One “input” variable which factors into college admissions decisions is an individual’s performance on standardized tests. Standardized test scores must be equally predictive of future academic success for members of all ethnic groups in order to measure equity of outcomes in terms of these inputs. Another “input” variable which should be valued in the admissions process is the diversity in background and perspective offered by minority applicants (see Chapter 4). Given the bias against minority applicants in terms of “objective” input criteria such as standardized test scores, and the value of diversity offered by their admission into colleges and universities, fairness dictates that race be taken into account in the input side of the equity equation. According to Clayton and Tangri (1989, p. 181), “including such a factor [as race] does not unbalance an equitable state, but rather restores balance by adjusting for the positive weighting of majority group membership that is ingrained within the system.”

Procedural justice

Procedural justice refers to the fairness of the procedures that guide the distribution of outcomes. Equality of opportunity is the most important criterion used to define a just procedure (Nacoste, 1987). Previous research indicates that if procedures are judged to be fair, individuals will not object to unfair outcomes (Tyler & McGraw, 1986). However, Clayton and Tangri (1989) argue that various forms of systematic bias may only be revealed by an examination of the differential outcomes of whites and minorities, and not by an examination of the procedures that were used to distribute the outcomes. Chapter 1 documents the persisting inequalities between whites and minorities that permeate institutions of higher education. An examination of these disparate outcomes reveals the degree to which inequalities have been introduced into the procedures of “equal opportunity.” Clayton and Tangri (1989) argue that outcomes must be assessed in order to determine whether or not a procedure which looks fair actually is fair. As described in Chapter 2, standard admissions procedures have not been fair in the case of minority access to higher education. One way in which affirmative action programs can help make the decision process more fair is by monitoring the outcomes of procedures to make sure that the criterion of “equal opportunity” is being met.

Microjustice vs. macrojustice

A final consideration of fairness beliefs that underlies the affirmative action debate involves the distinction between micro and macro levels of justice. Microjustice concerns the fairness of individual outcomes, while macrojustice concerns the fairness of the distribution of outcomes within a society (Brickman et al., 1981). Opponents of affirmative action argue that the policy is unfair at the individual (microjustice) level because the policy unfairly disadvantages certain qualified white men or unfairly advantages certain unqualified people of color. On the other hand, proponents of affirmative action argue that the policy is fair at the macrojustice level because the policy provides a fair distribution of outcomes within society. According to Clayton and Tangri (1989), affirmative action programs deserve to be evaluated on the macro level because

that is the only level at which the effects of discrimination can be clearly perceived. Crosby and her colleagues (Crosby, Clayton, Hemker, & Alksnis, 1986; Twiss, Tabb, & Crosby, 1989) have shown that when discrimination exists, it is more likely to be detected when an aggregate of cases is presented (in the form of a single fact sheet systematically summarizing all the instances of discrimination) than when single instances of discrimination are presented serially, one by one. If the goals of affirmative action are to eliminate societal inequalities (see Chapter 1), and to foster diversity in institutions of higher education (see Chapter 4), then the fairness of affirmative action programs should be judged at the macro rather than the micro level. Judged at the macro level, affirmative action is indeed a fair policy.

Social Categorization

Objections to affirmative action stem not only from beliefs that the policy is unfair, but also from beliefs that treating people differently on the basis of their group membership is antithetical to the goal of achieving a society in which opportunities and outcomes are independent of group membership. From this perspective, categorizing people into ethnic groups highlights group differences and thereby engages people's natural tendency to identify with their group, favor their own group over other groups, and defend their group's interests in conflicts over resources like university admissions. A great deal of social psychological research has demonstrated the profound effects of social categorization. Creating group boundaries or highlighting existing ones can strongly influence the perceptions, evaluations, and judgments of both members of one's own ingroup and members of other outgroups. For example, categorizing people into ingroups and outgroups causes people to view members of outgroups as more similar to one another (Wilder, 1981), and generates more negative evaluations (Tajfel, 1981), stereotypic perceptions (Rothbart, 1981), and negative attributions (Pettigrew, 1979) for the behavior of outgroup members than ingroup members.

However, other research has shown that there may be advantages to recognizing the social category membership of individuals. For example, Ferdman (1989) found that, in an organizational setting, making people in the dominant group pay attention to categorical information about people in the subordinate group (i.e., information related to their group membership) did not lower evaluations of subordinate group members. Rather, white managers evaluated Hispanic managers most positively when they were presented with both individuating and categorical information, and least positively when they were presented with individuating information alone. In another study, Clayton (1996) examined attitudes toward social categorization among two samples of college students and found that, while students were generally opposed to categorizing people on the basis of their group membership, opposition to affirmative action: (1) varied depending on whether the group of beneficiaries was a racial, gender, religious, sexual orientation, or college major group, and (2) was not based solely on objections to social categorization. Affirmative action for ethnic minority group members received more negative ratings than did affirmative action for women, replicating earlier findings (Clayton, 1992; Smith & Kluegel, 1984).

These results disconfirm the view that objections to affirmative action policies are based on a reluctance to identify people according to their social group. They also indicate that resistance to affirmative action, while apparently based on objective standards of justice, is actually influenced by subjective reactions to the group who will benefit from the policy. Consistent with these findings are those indicating that among the most important predictors of opposition to affirmative action are negative racial attitudes, in the form of modern racism (McConahay, 1986), symbolic racism (Jacobson,

1985; Kinder & Sears, 1981), aversive racism (Dovidio, Mann, & Gaertner, 1989), social dominance orientation (Singh, Sidanius, Hetts, & Federico, 1997), and perceived threat to the privileged position of whites (Bobo, 1997). The preponderance of empirical research therefore suggests that fairness requires taking race into account in affirmative action policies, because race influences social perceptions, attitudes, and behaviors in ways that disadvantage members of minority groups.

In sum, the social psychological research literature presents two main predictors of affirmative action opposition: racial attitudes and fairness beliefs. Dovidio and Gaertner's aversive racism framework further contends that racial attitudes and fairness beliefs are intimately related: Their research demonstrates that "although concerns about the fairness of affirmative action programs may be articulated as reasons to oppose these programs, subtle [racial] biases may be operating by influencing these perceptions of fairness, which in turn affect the intensity of the negative reactions" (Dovidio & Gaertner, 1996, p. 68). Sidanius, Levin, Rabinowitz, and Federico (in press) drew similar conclusions from a comparison of the social dominance and principled conservatism approaches to affirmative action opposition. While proponents of the principled conservatism model argue that political conservatives are ideologically opposed to affirmative action because the policy violates ideals of fairness and individual responsibility, Sidanius and his colleagues (in press) found that conservatives' opposition to affirmative action was driven primarily by their desires for group inequality and group-based dominance, rather than by their political ideology per se. If beliefs about fairness are driven by racial attitudes, then some people who claim to oppose affirmative action policies because they are unfair may be using the fairness argument in order to justify racially motivated opposition to affirmative action policies.

Dimensions of Diversity in Higher Education

Given what we know about theories of race relations and fairness, the challenge that we face today is how to use these theories to facilitate the goals of diversity in higher education. Smith (1995) has developed a framework outlining four important dimensions of diversity in higher education: representation, campus climate and intergroup relations, education and scholarship, and institutional transformation. The dimension of representation focuses on the inclusion and academic success of previously underrepresented groups, particularly African Americans, Latinos, and American Indians. Efforts to increase the access and success of members of these groups have been motivated by social justice and equity concerns. The second dimension, campus climate and intergroup relations, addresses the campus setting within which diverse groups of students interact. The focus of this dimension is on creating a positive learning environment and intergroup atmosphere for the benefit of all groups of students. The dimension of education and scholarship focuses on ways to incorporate diverse perspectives and knowledge bases into teaching methods, curricula, and areas of scholarly inquiry so as to better educate all students to live in a multicultural society. Lastly, institutional transformation focuses on the ways in which institutions must be restructured in order to fulfill the educational mission of diversity in all of its dimensions.

Theories of race and race relations have tended to focus narrowly on issues of representation and climate. Perhaps the most influential theory to emerge from social psychological research on race, the contact hypothesis, was developed primarily to address the dimension of campus climate and intergroup relations. The contact hypothesis, formulated by Gordon Allport (1954), focuses on ways to improve relations among groups who come into contact with one another. The theory specifies a number of critical conditions that must be present in order for intergroup contact to reduce prejudice

and lead to positive intergroup relations: members of different groups must have equal status within the contact situation, they must work together cooperatively in the pursuit of common goals, contact must be close enough to lead to perceptions of common interests and common humanity among the group members, and the contact must be sanctioned by institutional supports (e.g., by university administrators and policies). Contact theory was originally formulated during the era of legalized school segregation, when a primary concern was how to reduce prejudice and hostility between members of segregated groups when they come into contact with one another in desegregated environments.

The issue of diversity that we face today raises different questions than those addressed by the contact hypothesis. In the post-civil rights era, there is a widespread belief in the equality of opportunity, despite the reality of persisting racial inequalities. The challenge that we face today is how educational institutions can treat people as individuals in order to ensure equality of opportunity, while at the same time acknowledging the persisting inequalities that demonstrate how race continues to matter in society. This issue involves all four dimensions of diversity: (1) how to incorporate both individual characteristics and group membership into selection and evaluation procedures in order to promote access and success for underrepresented groups on college campuses; (2) how to facilitate positive intergroup relations by recognizing that individuals assimilate into larger groups to meet needs for identity and belonging, but that individuals within groups vary widely from one another and should therefore not be subject to group stereotypes; (3) how to educate students to live in a society in which individual differences and collective representations contribute to a diversity of perspectives; and (4) how to restructure institutions of higher education so that they fulfill their mission of diversity.

An Integrated View

The fundamental question, then, is whether people should be categorized and treated as group members, or whether they should be decategorized and treated as individuals within institutions of higher education. According to the group perspective, group memberships must be taken into account in decisions of access because of power differentials between groups, and they must be taken into account in terms of climate because they meet basic human needs for group identity and belonging. According to the individualistic perspective, on the other hand, group memberships must not be taken into account in decisions of access because they are irrelevant to more objective merit criteria, and they must not be taken into account in terms of climate because they exaggerate group differences and thereby exacerbate intergroup conflict. The problem with traditional research paradigms is that they have couched these two perspectives as a false dichotomy, and they have focused on one perspective to the exclusion of the other. Ferdman (1997) proposes that one way to reconcile these seemingly contradictory individualistic and group perspectives is to integrate them into a new view of fairness that promotes both the protection of group rights and the acknowledgment of individual differences. This integrated view offers a new framework for understanding the complexity of contemporary race relations. Rather than focusing on either the individualistic or the group perspective, or on one dimension of diversity rather than another, this new paradigm attempts to incorporate both the individualistic and group perspectives into an integrated framework that can be applied to all four dimensions of diversity.

Previous research on the first dimension, representation, demonstrates the utility of factoring both group membership and individual characteristics into selection and evaluation procedures in order to increase minority access and success on college

campuses. For example, Nacoste (1990, 1994, 1996) has examined how psychological responses to affirmative action vary as a function of the weight given to group membership and individual characteristics in selection procedures. Affirmative action procedures which give weight to group membership, but give more weight and consideration to individual achievement-related characteristics are evaluated as procedurally fairer than those which give the most weight to group membership. Therefore, individual characteristics and group membership should be combined, though differentially weighted, in the selection process so that the procedures used to enhance minority access to higher education are considered fair. Furthermore, universities should reveal the nature of their weighted selection procedures so that these procedures will be perceived to be fair by both beneficiaries and nonbeneficiaries of affirmative action. As the research literature consistently demonstrates, perceptions of fairness are important determinants of support for affirmative action policies (Clayton & Tangri, 1989; Nacoste, 1989).

The criteria used to guide selection procedures have also been found to influence self-evaluations and performance expectancies among beneficiaries of affirmative action (Major, Feinstein, & Crocker, 1994). Cognitive theories of emotion posit that when people achieve positive outcomes like college admission and successful academic performance, they are likely to experience more positive affect and evaluate themselves and their attributes more favorably when they can attribute these outcomes to internal factors like ability or merit (Weiner, 1985). When positive outcomes are attributed to benefits based on group membership, beneficiaries are less certain that they could have achieved these outcomes based solely on their personal merit or deserving. This “attributional ambiguity” about personal deserving is expected to reduce self-evaluations and performance expectancies. However, Major and her colleagues (1994) found that affirmative action procedures that were perceived to be based on both individual merit and group membership reduced ambiguity about the extent to which selection was deserved and enhanced the self-evaluations of the competence of beneficiaries. These increased feelings of competence may then lead to enhanced academic success among minority beneficiaries of affirmative action. Once again, in order for affirmative action selection procedures to be successful in enhancing minority access and success, it must be made clear that selection is based on individual merit as well as group membership. Incorporating both selection criteria increases perceptions of fairness and reduces attributional ambiguity about the personal competence of those selected, thereby reducing negative responses to affirmative action procedures.

Brewer’s optimal distinctiveness model provides another theoretical framework which integrates both the individualistic and group perspectives. As described previously, this perspective emphasizes that human beings have basic needs for both assimilation with others (as groups) and differentiation from others (as individuals). People become uncomfortable when they are too individuated, and they become uncomfortable when they are lumped together and categorized on the basis of some group membership when such categorization denies their cherished individuality. These opposing needs for assimilation and differentiation have important implications for procedural justice concerns. Just as some minority group members feel that procedures which ignore their group membership are unfair because they fail to take into account group-based power differentials that impede individual advancement, individuals also feel that procedures which treat them solely on the basis of their group membership are unfair because such procedures do not take into account individual variation within their group. Individuals belong to many different groups and these multiple group identities both influence and are influenced by unique life experiences, opportunities, and outcomes. In order to enhance minority access and success, then, both group differences

and individual uniqueness should be taken into account in selection and evaluation procedures.

Two additional dimensions of diversity, institutional viability and institutional goals to educate students to live in a diverse society, will also be promoted to the degree that unique perspectives derived from the intersection between individual and group identities are represented on college campuses. In order for an institution to be viable, it must promote both the individual and group interests of members of the university community (i.e., students, faculty, staff, board of trustees) and society at large. And in order for an institution to fulfill its mission of educating all students to live in a multicultural society, it must expose students to the breadth of perspectives offered not only by members of different ethnic groups, but also by different individuals within the same ethnic group whose life experiences vary dramatically. Exposure to the tremendous variation between individual members of the same ethnic group will reduce the use of racial stereotypes and increase perceptions of similarity among members of different ethnic groups based on common individual interests. Students will be better prepared to live in a diverse society if they learn to appreciate similarities with and differences from others based on both individual and group characteristics.

A fourth dimension of diversity, intergroup climate, will also be enhanced to the degree that individuals are able to recognize similarities with and differences from members of other ethnic groups. Previous research has shown that one way to improve relations between different groups is to create a superordinate or common ingroup identity which emphasizes what everyone has in common and meets needs for assimilation, while at the same time respecting individuals' needs for differentiation into smaller ethnic subgroups. In their research on the common ingroup identity model, Gaertner and his colleagues (1994) found that intergroup bias among students attending a multicultural high school was lower when students perceived the student body as one superordinate group than when they perceived the student body as being composed of separate subgroups. Importantly, the researchers also emphasize that the development of a common ingroup identity does not necessarily require each group to completely give up its subgroup identity, just so long as diverse group members conceive of themselves as members of different groups that are all playing on the same team. For example, Gaertner and his colleagues (1994) found that intergroup bias was lower when students thought of themselves simultaneously as "Americans" (superordinate group) and as members of their particular ethnic/racial subgroup, compared to when they thought of themselves just as members of their particular ethnic/racial subgroup. The final conclusion to be drawn from this research is that sharing a superordinate ingroup identity with members of other ethnic groups decreases intergroup bias, even when the superordinate identity (e.g., American) and ethnic subgroup identity (e.g., white, black, Asian, Hispanic) are both important to individuals.

Huo and her colleagues drew similar conclusions in their research on the group-value model of justice (Huo, Smith, Tyler, & Lind, 1996). According to this model, people will accept decisions made by authorities when they feel that they are being treated fairly, even when they do not obtain desired outcomes. When evaluations of an authority figure are based more on relational issues (treatment with respect and honesty) than on instrumental issues (outcomes), then conflicts are less likely to arise when people receive unfavorable outcomes. Consistent with the model's predictions, Huo and her colleagues (1996) found that when employees described conflicts with supervisors from different ethnic backgrounds than their own, they were more satisfied with the interaction the more they felt they were treated with respect and benevolence, regardless of whether or not the conflict situation was resolved in their favor. Important to our discussion of intergroup climate are findings that even people who identified strongly with their ethnic

subgroup focused more on relational issues than on instrumental issues in their evaluations of authorities, just so long as they also identified strongly with the superordinate group (i.e., the work organization). These findings suggest that intergroup conflict on multicultural college campuses will be minimized, even when there are disparities in outcomes, when the diverse groups of students identify with a superordinate ingroup (regardless of whether or not they also identify with their particular ethnic subgroup).

Both of these identity and justice models suggest that identification with a “common ingroup” or “superordinate group” will result in a more positive intergroup climate. They also emphasize that the development of a common ingroup identity will still have positive effects, even when people identify strongly with their ethnic or racial subgroup. In practice, Gaertner and his colleagues (1994) suggest that a common ingroup identity may be activated by increasing the salience of an existing common group membership (e.g., as Americans), or by introducing factors that are perceived to be shared by group members (e.g., a common enemy of the state). This recategorization of different groups into one group is viewed as a particularly powerful and pragmatic strategy for improving reactions to affirmative action (Dovidio & Gaertner, 1996; Murrell et al., 1994). For example, Smith and Tyler (1996) found that middle-class whites who identified more strongly as Americans than as Caucasians had more positive attitudes toward affirmative action than those who identified more strongly as Caucasians. In terms of process, the salience of a common ingroup identity may reduce the degree to which opposition to affirmative action is driven by ethnic group identity, competition, and dominance motives. That is, if people derive a sense of belonging and identification from a common ingroup, then their social identity will not be bolstered by feelings of superiority to fellow ingroup members (rather, their identity needs will be fulfilled through favorable comparisons with people outside the common ingroup), they will not view their interests as competing with those of fellow ingroup members, and they will not view their position of dominance as being threatened by the demands of fellow ingroup members. Rather, recategorizing different racial groups into a common ingroup would focus on the need for affirmative action policies in terms of the beneficial consequences for the society as a whole in meeting the demands of all four dimensions of diversity: increasing the inclusion and academic success of minority groups, improving the campus climate within which diverse groups of students interact, better educating all students to live in a pluralistic society, and restructuring institutions in order to fulfill their commitments to diversity.

Conclusion

In conclusion, the dominant ideology in the United States is one which encompasses a belief in widespread opportunity, individual responsibility for achievement, and equity principles of justice (Kluegel & Smith, 1986). According to this dominant ideology, fairness requires treating people as individuals. However, social psychological research suggests that fairness requires taking race into account, because race influences social perceptions, attitudes, and behaviors in ways that disadvantage members of minority groups. Research on unintentional racial biases, group identity processes, group competition, and group dominance motives demonstrates the need for affirmative action. The challenge of future research on diversity in higher education will be to establish how educational institutions can treat people as individuals, while at the same time acknowledging the collective representations that matter in society. Promising research directions are offered by empirical studies on successful selection and evaluation procedures which take into account both individual characteristics and group

memberships, and successful ways to improve campus climate by creating a superordinate or common ingroup identity which emphasizes what everyone has in common, while at the same time respecting individuals' needs for differentiation into smaller ethnic subgroups. These studies suggest that an integrated framework which incorporates both the individualistic and group perspectives will enable us to understand the complexity of contemporary race relations in a way that traditional research paradigms which focus on a single perspective have failed to do.

In this chapter, the social psychological research literature is used as a prime example of how social scientists have advanced our understanding of racial dynamics. This knowledge base is highly relevant to the public debate about diversity in higher education, but is usually found only in scholarly journals. In order for this rich knowledge base to help university administrators, public policy makers, lawyers, and other members of the public understand the complex issue of diversity, social scientists must learn how to package relevant research findings for public consumption, and find outlets that have wide circulation. In turn, administrators, policy makers, and others must seek out relevant social science findings and apply them to debates in the public forum. In order to promote the view of higher education as a public good, knowledge gained from social science research must be applied to serve the public good.

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Chapter 4

Standardized Testing and Equal Access: A Tutorial

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Introduction

Standardized testing has played an increasingly prominent role in higher education admission decisions, particularly during the latter half of the twentieth century. Simultaneously, it has also played an increasingly prominent role in the threat to diversity in higher education in an era of rising opposition to affirmation action policies and practices. This latter role for admission testing is primarily a result of the way that test scores are used and interpreted; it is not the tests themselves that create the problem.

Substantial research evidence supports the validity of standardized admission tests as one factor in the admission process. Evidence of test score misuse also exists. One example of score misuse is over-reliance on standardized test scores for higher education admission decisions, ignoring a solid research base demonstrating their limitations. Related problems include viewing a test score as a comprehensive and objective measure of merit in selecting applicants, and using scores of admitted applicants to assess the quality of an academic institution. Such misuses of admission test scores result in systematic adverse impact on minority applicants to higher education; they also mask the value of these instruments when they are used for the purposes for which they were intended. Yet, despite the available data, there has been increasing call, particularly among the media and politicians most recently, to use test scores beyond the uses for which they were validated.

Adding to the problem of inappropriate use of standardized tests in the complex admission process are several assumptions and suppositions about those tests for which little or no research support exists. One goal of this chapter is to identify critical issues that must be evaluated when test scores are included among the factors considered in higher education admission decisions. Other goals are to bring to bear on those issues a compilation of relevant research and to identify critical areas in which supporting research is outdated, insufficient, or non-existent.

An Historical Perspective on the Use of Standardized Tests in the Higher Education Admission Process

The enthusiasm with which standardized tests were embraced in the era following World War II was partly an expedient response to the substantial increase in the number of college applications that needed to be reviewed and partly a consequence of the perception of tests as neutral arbiters of academic credentials. The college opportunities afforded through the GI Bill resulted in an influx of college applicants who were not products of the socially elite private education system. Standardized test scores were viewed as a mechanism for admission committees to evaluate grades and courses from schools with which they were not familiar. Thus, an anticipated consequence of the early employment of standardized higher education admission tests was to open the doors of educational opportunity to a broad range of students who were not part of the traditional privileged college-going population, particularly doors to the elite schools in the northeast.

Over the years, the perception of standardized admission tests has changed from one of inclusion to one of exclusion, often viewed as a mechanism to deny access to increasingly scarce educational opportunities, especially at the most selective institutions where the number of applicants substantially exceeds the number of available places. This section will explore the history of standardized testing in higher education admissions, and will also trace changes in the demographics of the college applicant population, to provide a perspective on where we are and how we got here.

The Development and Growth of Admission Tests

The introduction of a common admission test that could be used as part of the admission criteria across multiple colleges was first introduced in the U.S. in 1900. Prior to that time, each college that chose to use an entrance examination administered its own. Primarily private colleges in the northeast used entrance examinations. Those examinations were designed by each college to assure that its admittees had acquired an adequate foundation in core academic courses and that they were prepared to undertake rigorous college work. The content of the examinations varied from one college to the next. From the perspective of secondary school headmasters, one problem with these examinations was that the secondary school needed to prepare multiple curricula for their students in order to assure that they would receive instruction in the subject areas deemed important by the college(s) to which they applied. A second problem was that students applying to several colleges needed to prepare for and sit for several examinations. The urging from secondary school headmasters prompted the consideration of a common examination by a small group of colleges in the northeast. During the first half of the twentieth century, that initial consideration evolved into formal extensive nation-wide testing of undergraduate, graduate, and professional school applicants as part of the higher education application and admission process. The chronology of key events in the development of the major standardized admission tests used by higher education is summarized in Table 1.

Hanford (1991) provides a comprehensive and detailed history of the development of college admission testing programs. The following descriptions of the development of the SAT and the founding of ETS are summaries of selected highlights from that history.

In 1900, a small group of influential colleges in the Northeast first agreed on core subject areas that would be included in the entrance examination process, and then agreed to administer a common examination to all their applicants. This group of colleges established the

Table 1

Chronology of key events in the development of standardized admission tests as part of the higher education application and selection process

Date	Event
Nov. 17, 1900	Formation of the College Entrance Examination Board formally announced.
June 17, 1901	First CEEB tests administered to 973 students at 69 test centers (Donlon, 1984).
June 23, 1926	First SAT, made up primarily of multiple-choice questions, was administered.
1929	SAT was divided into two sections--verbal aptitude and mathematical aptitude.
1930	AAMC first sponsored an objective test for applicants to medical school (called the Scholastic Aptitude Test for Medical School until 1946).
April 1, 1937	Wholly multiple choice achievement tests were introduced for undergraduate admission.
October 1, 1937	The first GREs, known at that time as the Cooperative Graduate Testing program, were administered to first year graduate students at Columbia, Harvard, Princeton, and Yale.
fall 1939	The 16 GRE Advanced Tests were administered for the first time.
1946	The admission test for medical school was renamed the Professional Aptitude Test; it was renamed the MCAT in 1948.
Nov. 10, 1947	Representatives of nine law schools met with members of the CEEB to request an admission test analogous to the SAT but at the appropriate level and content for use in law school admission.
Dec. 19, 1947	CEEB separates, ACE, and the Carnegie Foundation for the Advancement of Teaching agree to separate the testing operations and form a new enterprise--Educational Testing Service (ETS).
Jan. 1, 1948	ETS started operations in Princeton, NJ.
Feb. 1948	The LSAT was administered for the first time.
March 1953	12 graduate schools of business agreed that a nationwide testing program for business school admissions would be useful.
Feb. 1954	The GMAT (called the Admission Test for Graduate Study in Business until 1976) was administered for the first time.
1957	The American College Testing Program was founded.

College Entrance Examination Board (CEEB) to prepare and administer the new examinations on their behalf. The CEEB was initially located on the Columbia University campus in New York City. The first examinations developed by the CEEB were essay examinations, not multiple choice, and were subject matter specific. Preparatory school headmasters welcomed the new examinations, primarily because the content of the new examinations provided a detailed description of the secondary school curriculum that was valued by the group of colleges to which their students aspired. This common essay examination system worked efficiently during the period in which the original participating colleges obtained their new students from the narrow pool of U.S. preparatory schools in the northeast. Shortly after World War I, several of those colleges began expanding the geographic area from which they recruited their potential students, with thoughts of becoming national rather than local colleges and universities. When their recruitment goals incorporated attracting academically able applicants from beyond the confines of the elite northeast preparatory schools with which they were familiar, the colleges requested that the CEEB revise the test content to make it more comprehensive and less prescriptive. Simultaneous with (and at least partly a consequence of) the request for a shift in examination emphasis from the highly specific to a more general content, the CEEB began its first experimentation with the use of the multiple choice item format. Because multiple choice questions could be answered so much more quickly than essay questions, they were seen as a vehicle for more broadly sampling applicants' abilities and subject-matter knowledge.

At the request of the CEEB, Carl Brigham, a psychology professor from Princeton University, developed a battery of multiple choice questions to be used as an alternative to the original College Board essay examinations. He used the *Army Alpha Test* of general abilities, developed during World War I by the U.S. army to sort recruits into appropriate assignments, as a model. CEEB administered the first multiple choice SAT in June, 1926. Brigham also developed a multiple-choice version of examinations designed to assess subject specific knowledge to be used in conjunction with the general aptitude assessment of the SAT. Initially, the participating colleges were uncertain about the utility and the validity of the multiple-choice format. It was not long before they accepted that the new item format provided them with useful information about the academic preparation and potential of their applicants. Even so, it wasn't until the start of World War II that the multiple-choice examination fully replaced the essay examinations. The replacement was primarily a practical consequence of the travel restrictions related to the war. That is, the professors and secondary school teachers who traditionally graded the essays were unable to travel to NYC in order to grade the essays. By the time the war ended and the travel restrictions were lifted, the volume of new college applicants resulting from the GI bill made it impractical to return to the old free response essay examinations. Additionally, colleges had become comfortable with the new test content and scoring, and so the multiple-choice format of the SAT became firmly entrenched.

The CEEB's success with the SAT aroused the interest of both graduate and professional schools. By the end of World War II, the CEEB was also administering the Medical College Admission Test (MCAT) and the Graduate Record Examinations (GRE), and developing the Law School Admission Test (LSAT). The expanding testing activities required expanding resources—resources beyond those anticipated and available under the then current structure. In response, the College Board, along with two other enterprises that were engaged in testing activities (the American Council on Education and the Carnegie Foundation for the Advancement of Teaching) decided to consolidate test development, test administration, and test-related research into an independent organization. In 1947, the New York Board of Regents granted a charter to the newly formed Educational Testing Service. From its inception, ETS was an

organization separate from CEEB, with ETS serving as the test-maker, but CEEB owning the SAT and maintaining policy control over it. The College Board, first alone and then with ETS, held a monopoly in the college admission testing business from its establishment in 1900 until 1959, when the American College Testing Program (ACT) was founded by E. F. Lindquist.

ACT was founded in response to a conception by Lindquist of the purpose for college entrance examinations that was different from that of ETS and the College Board. Specifically, Lindquist argued that a college entrance examination should predict college success but should also serve other educational purposes. The test envisioned by Lindquist would be "useful to high school counselors in advising students on their educational and vocational careers, or on their choice of type of college" (Lindquist, 1958, p. 106.) It also would be useful to high school teachers in "adapting instruction to individual differences, and to high school administrators in evaluating the entire educational offering of the school. Likewise, the same test battery might be useful to the college authorities for placement purposes, or for purposes of counseling and guidance, or to help them better define the college's task by more adequately describing the status and needs of their entering student body" (Lindquist, 1958, p. 106-107.) The first ACT was administered in the fall of 1959.

The differences in purpose between the ACT and the SAT articulated by Lindquist more than 40 years ago continue to define the primary distinctions between the two testing programs today. When the ACT was first introduced, it was utilized primarily in the Midwest, while the SAT was the examination of choice on the east and west coasts. Over the years, partly as a consequence of national marketing efforts by both organizations, and partly as a consequence of changing needs among colleges, many colleges and universities today accept either ACT or SAT scores from their applicants.

The Changing Face of the Applicant Pool

During the period in which the new tests were taking their place in the college admissions process, both the number and the demographic characteristics of students entering higher education were undergoing change. The changes in the applicant pool were very instrumental in establishing the place of the SAT and ACT at the undergraduate level and the GRE, LSAT, GMAT, and MCAT at the graduate and professional school level. The search for applicants from a more national pool beginning around 1930 initiated the increase in the applicant population; the number of college aspirants increased more significantly following World War II, primarily as a consequence of new government support for education. Even so, the ethnic diversity of those seeking college admission did not increase noticeably until the late sixties and early seventies.

Ethnic and Gender Diversity in the Applicant Pool

In 1954 a statement defining the right of minorities to have access to higher education was clearly articulated by the U.S. Supreme Court in the important civil rights case known as *Brown v. Board of Education*. One of the most noteworthy outcomes of that case was the Supreme Court's explicit position that admission to publicly supported colleges and universities could not be denied on the basis of race. The decision in *Brown* struck down the practice of "separate but equal" in education. Several earlier cases paved the way for this landmark decision. These include *Missouri ex rel. Gaines vs. Canada* (305 US 337, 1938)¹; *Sipeil vs. Board of*

¹ In *Missouri ex rel. Gaines vs. Canada*, the Supreme Court determined that the University of Missouri could not deny admission to a black student, despite the University's willingness to send

Regents of the University of Oklahoma (332 US 631, 1948),²; Sweatt and Painter vs. University of Texas Law School (339 US 629, 1950) and McLaurin vs. Oklahoma State University (339 US 637, 1950)³. Despite the clear position of the Supreme Court, states resisted. Thus, the rulings by themselves failed to produce a large influx of minority students into higher education. Both the Civil Rights Act of 1964 and subsequent efforts by civil rights groups to assure that the Act was enforced were required before evidence of increased access was seen in enrollment statistics. A variety of additional factors contributed to the change in the demographic makeup of the higher education population. These included “the infusion of federal funds into institutions of higher education and the resulting “greater autonomy in decision on admissions” (Karen, 1990, p.230); the implementation of ‘need-blind’ admission practices in the mid-1960s by most elite colleges, assuring that no applicants would be denied admission because of financial need nor denied financial aid after they were admitted; and the introduction of affirmative action programs for women and minorities in the late 1960s.

Availability of Data

Data about minority enrollment in higher education prior to the early 1970's is both scarce and constrained. Information about changes in minority enrollment from the mid-1950s to the mid-1970s is limited by the lack of systematic data collection during that period. The U.S. Census Bureau was the primary source of data about minority enrollment during much of that period, and the accuracy of some of that data, which was extrapolated from interviews of only 50,000 households, is questionable (Abramowitz, 1976). Another source of data was the Office of Civil Rights, which collected data through biennial surveys. Its early surveys lacked continuity, omitted certain ethnic groups, and covered only full-time students (National Advisory Committee on Black Higher Education and Black Colleges and Universities, 1979, p.10). In 1976, the Office of Civil Rights and the National Center for Education Statistics (NCES) began working collaboratively on data collection and compilation, resulting in increased quality and consistency of data. Despite their limitations, the available data provide some indication of the shifting demographics during a critical time period in higher education. These data are especially important because they demonstrate how small the presence of minority college applicants and students was in higher education during the development and norming of standardized tests used for admission to undergraduate, graduate and professional schools.

Trends in the Data

The available data demonstrate gains in enrollment for ethnic minority groups over the past 30 years, particularly in the early years following the Civil Rights Act. Information about black students was recorded earlier than was information about other minority groups. Those

the student to any of the four adjoining states that would admit him.

2 In this case, the Supreme Court responded to the University’s refusal to admit black students by demanding that it provide a law school education to qualified applicants regardless of race.

3 The rulings in, Sweatt and Painter vs. University of Texas Law School and McLaurin vs. Oklahoma State University came down on the same day in 1950. In each of those rulings, the court again confirmed that students could not be excluded from educational opportunity based on race. It further demanded that physically separating black students from white students after admitting them to the program did not provide equal educational opportunity and was not acceptable.

data contribute to an understanding of minority enrollment trends in the latter half of the twentieth century. For example, the data show that the number of black college students increased by more than 275 percent in the ten-year period from 1966 to 1976. As a percentage of the total number of students enrolled, blacks increased from 4.6 to 10.7 during that period (NCES, 1978, pp. 120-121). The number of black students enrolled was reported by the Census Bureau to be 282,000 in 1966 and 1,062,000 in 1978 (U.S. Bureau of the Census, May 1980, p. 2.) These data include both two-year and four-year institutions. Because black students have traditionally been over represented in two-year institutions, which typically do not require admission tests, the proportional representation of black students among admission-test takers during that period most likely was somewhat lower. The College Board did not begin to collect descriptive statistics on its test taking populations until 1972. The proportional representation of different ethnic groups among SAT takers for selected years, beginning 1973, is presented in Table 2. These data show a substantial increase in the percentage of minority test takers during the 25-year period from 1973 to 1998. The percentage increased for each minority group; the largest relative increase was among Asian American test takers. Importantly, the total number of respondents increased by more than a quarter million between 1973 and 1998, so that the percentage increases among minority test takers also represent increases in their absolute numbers.

Enrollment data by ethnic groups for four-year institutions alone are available from NCES beginning in 1976. Data for selected years are shown separately by ethnic group in Table 3 for the period 1976 through 1995. These data show that the number of ethnic minority students in all four-year institutions increased from approximately 931,000 (approximately 13 percent of the total) in 1976 to nearly 1,886,000 (nearly 21.5 percent) in 1995 (U.S. Department of Education, 1997). All ethnic minority groups showed some increase in proportion of the enrollment distribution during that period, and as was shown for SAT takers, the largest increase was reported for Asian/Pacific Islanders. Their participation more than tripled from 1.7 percent of the total in 1976 to 5.5 percent in 1995. In absolute numbers, the total enrollment in all four-year institutions increased during that time period from 7,107,000 to 8,760,000. These data are consistent with the rise in the proportion of minority SAT takers from 11 percent in 1973 to almost 31 percent in 1995 shown in Table 2.

Similar trends are found with respect to minority enrollment in graduate and professional schools, as presented in Table 4. Less than 10 percent of each of the graduate school and the professional school populations were minority in 1978. Those percentages increased to 14.9 and 21.7, respectively, by 1994. Law school enrollment data made available from the American Bar Association (ABA) are consistent with the general trend observed in professional school enrollment data shown in Table 4. The ABA reported that approximately nine percent of the first year class was minority in 1977-78, compared with nearly 18 percent in the fall 1991 class (American Bar Association, 1993).

The Role of Admission Test Scores in Litigation about Special Admission Policies and Practice

Colleges and universities repeatedly warn applicants that test scores are only one of many factors that they use in making admission decisions among their many applicants. Most schools do not provide explicit information about how test scores are used in the admission process, particularly with regard to the amount of weight allocated to test scores relative to other factors that are part of the decision to admit or reject. However, it is not unusual for some

Table 2

Ethnic background of ATP college bound seniors for selected years from 1973 to 1998 expressed as percentage of total Student Descriptive Questionnaire respondents

Response Option	1973 ¹ Percentage	1978 ¹ Percentage	1983 ¹ Percentage	1990 ² Percentage	1995 ² Percentage	1998 ² Percentage
American Indian	0.0	0.4	0.5	1.1	0.9	1.0
Black/ Afro-American	7.0	9.0	8.8	10.0	10.7	10.9
Mexican American or Chicano	1.0	1.7	1.9	2.8	3.7	3.9
Oriental or Asian American	2.0	2.6	4.2	7.6	8.4	9.0
Puerto Rican	0.0	1.0	1.2	1.2	1.3	1.3
White or Caucasian	87.0	83.0	81.1	73.4	69.2	67.1
Other	1.0	2.3	2.2	4.0	5.7	6.8
Number Responding	784,848	893,767	875,475	947,258	973,870	1,049,773
Percent Minority	11.0	17.0	18.9	26.6	30.8	32.9

Sources:

¹Donlon, T.F. (Ed.). (1984). The College Board Technical Handbook for the Scholastic Aptitude Test and Achievement Tests. New York: College Entrance Examination Board. p. 181

² College Entrance Examination Board, SAT 1998 College Bound Seniors, National Report. New York: Author.

Table 3

Total enrollment in four-year institutions of higher education, by race/ethnicity of student, for selected years from fall 1976 to fall 1995 (Numbers in thousands)

Race/ethnicity	1976	1980	1990	1993	1995
Total	7,107	7,565	8,579	8,739	8,760
White	5,999	6,275	6,768	6,639	6,517
Total Minority	931	1,050	1,486	1,734	1,886
American Indian/ Alaskan Native	35	37	48	59	66
Asian American	119	162	357	429	482
Black	604	634	723	814	852
Hispanic	173	217	358	432	486

Source: US Department of Education, NCES, Digest of Educational Statistics, 1997.

Table 4

Graduate and professional school enrollment by race/ethnicity for selected years from fall 1978 to fall 1994 (Numbers in thousands)

Race/ethnicity	1978	1982	1988	1994
GRADUATE SCHOOL ENROLLMENT				
Total	1,219	1,235	1,472	1,722
White, non-Hispanic	1,019	1,002	1,153	1,287
Total Minority	120	123	167	256
Asian American	24	30	46	73
Black, non-Hispanic	68	61	76	111
Hispanic	24	27	39	64
PROFESSIONAL SCHOOL ENROLLMENT				
Total	255	278	267	295
White, non-Hispanic	229	246	223	224
Total Minority	22	29	39	64
Asian American	5	8	14	28
Black, non-Hispanic	11	13	14	21
Hispanic	5	7	9	13

Sources:

US Department of Education, NCES, Trends in racial/ethnic enrollment: Fall 1978 through 1988. Washington, DC: U.S. Government Printing Office, June, 1990.

US Bureau of the Census, Statistical abstract of the United States: 1997. Washington, DC, 1997.

applicants who were denied admission, particularly to more highly competitive schools, to have higher test scores than many applicants who were admitted. And yet, denial of admission to white applicants who earned higher standardized test scores than did applicants of color who gained admission has repeatedly served as the trigger to litigation in the area of affirmative action admissions in higher education. This section will explore the past, present, and future of affirmative action litigation from the narrow perspective of the role of test scores in shaping the complaints, the defenses, and the rulings.

Affirmative action programs were introduced in higher education systems in the late 1960s with a stated goal of increasing and encouraging minority participation in higher education. The ways in which colleges implemented those programs have been the subject of litigation over the past twenty years. Most legal challenges to affirmative action admission practice have been predicated on interpretation of the fourteenth amendment to the U.S. Constitution. The fourteenth amendment provides that “No State shall make or enforce any law which shall...deny to any person within its jurisdiction the equal protection of the laws.” Its original purpose was to assure that newly freed slaves were treated fairly by state law. In affirmative action litigation, the clause has been subject to varying interpretations. Thus far, the Supreme Court has been supportive of programs developed by colleges and universities designed to remedy past discrimination or to achieve diversity, but it also has imposed limits on those programs to prevent misuse or abuse. Key among those limits are that race-based affirmative action programs must be subjected to strict scrutiny and that the use of inflexible quotas, especially using race as the only factor for selection is prohibited. The Supreme Court’s most extensive explication of the limitations of race conscious admission practices came in its ruling on a landmark case, the *Regents of the University of California vs. Bakke*, in 1978, in which differential use of test scores was challenged under the fourteenth amendment.

An Overview of *Bakke*

Alan Bakke applied for admission to the University of California—Davis Medical School during two different admission cycles and was denied both times. At the time he applied, the medical school used two separate admission standards—one for regular admissions and the other for a special program. The special admission program was designed to provide applicants from economically or educationally disadvantaged backgrounds the opportunity to be admitted when they otherwise would not because their applications did not meet traditional academic requirements. The school reserved 16 of its 100 seats exclusively for applicants accepted under that program. Applicants checked a box on their application if they wanted to be considered under the special program. The practice at the medical school at the time Bakke was an applicant was to automatically reject applicants to the regular admission program if their test scores and grades were below a certain cut-off point. In contrast, applicants to the special program were not automatically rejected because of low test scores or low grades. Further, the admission committee did not rank their test scores against those of applicants in the regular admission pool.

White applicants were eligible to request consideration under the special admission program, but, at the time of Bakke’s complaint, none had ever been admitted under it. In fact, several of the 16 seats reserved for the special admission program remained unfilled in each of the years that Bakke was denied and he was not considered for any of them. A primary factor in his complaint was that he had presented higher test scores and grades than did applicants who were admitted under the special program. The basis of his suit was that he was excluded from consideration for admission under the special admission program based exclusively on his race,

violating his constitutional right to equal protection under the Fourteenth Amendment. Even though the school argued that he did not meet the criteria of educational or economic disadvantage, the court agreed with Bakke that race was the only factor that determined who would be admitted under the special program. On that basis, the Supreme Court found that UC—Davis’ special admission program violated the U.S. Constitution. From the perspective of affirmative action practices, the importance of *Bakke* was not in the Court’s finding with respect to the special program at UC—Davis. Rather, it was in the opinion of a majority of justices that while race could not be used as the sole factor for admission, race could be considered as a factor in order to remedy past discrimination. This endorsement is found in Justice Powell’s declaration that “race or ethnic background may be deemed a ‘plus’ in a particular applicant’s file, [so long as the applicant’s race] does not insulate the individual from comparison with all other candidates for the available seats.” Since the *Bakke* ruling, higher education has acted under the proposition that when the goal of its admission practice is to establish or maintain diversity, race could be a factor in the admission process under two provisos. One proviso is that diversity is not defined exclusively in racial terms; the other is that race is only one of many factors used to admit a diverse class. The court did not define what those other factors should be. But, neither did it suggest that having test scores and grades that were higher than those of other applicants who were admitted should in itself constitute grounds for a legal complaint against an institution by an applicant who was denied. Even so, subsequent challenges to affirmative action practices in admissions to higher education triggered by evidence or perception of differential use of test scores in the admission process have been raised.

An Overview of *Hopwood*

Approximately 15 years after *Bakke*, four white applicants to the University of Texas School of Law instigated *Hopwood vs. the State of Texas*. In 1994, Cheryl Hopwood and the three other plaintiffs claimed that they were denied admission to the law school while black and Mexican American applicants with lower Law School Admission Test (LSAT) scores and lower undergraduate grade point averages were accepted. At the time that the plaintiffs applied for admission, UT School of Law had an affirmative action admission program in place that did not differ in several respects from the UC-Davis Medical School program that the Supreme Court had rejected. That is, the school reserved approximately 10% of its places for Mexican American applicants and 5% for black applicants. Additionally, separate admission committees were used to review minority and non-minority applicants. Thus, minority applicants were not compared directly with white applicants. Of relevance to the current discussion, UT relied heavily on LSAT scores and UGPAs in making all its admission decisions. The university claimed to use other factors including undergraduate major, increasing or decreasing grade trends, grade inflation, personal perspective, life experiences, and state of residency, but admitted to using a gross quantitative index, based only on test scores and grades, to initially sort its large volume of applications. Specifically, the school created an index score by weighting the LSAT score 60% and the UGPA 40%. The index score was used to sort applicants into three categories: presumptive admit, discretionary zone, and presumptive deny. The law school offered admissions to most but not all applicants in the presumptive admit category and denied admission to most but not all applicants in the presumptive deny category. Under the affirmative action admission program in place at the time, an index value of 199 was required for non-preferred applicants to be presumptively admitted, while a value of 189 was required for black and Mexican American applicants. At the other end of the scale, an index score of 192 or lower placed non-preferred applicants in the presumptive deny category, while a 179 or lower placed

black or Mexican American applicants in that category. Striking in these figures is the fact that a black or Mexican American applicant was placed in the presumptive admit category with an index value that was three points lower than the value at which other applicants were placed in the presumptive deny category. These are the kinds of test and grade data that can lead opponents of affirmative action programs to conclude that a necessary consequence of these programs is a compromise of merit and academic standards.

When *Hopwood* was heard, the district court found that the school's affirmative action practice was in violation of the constitution because it used separate admission committees for minority and majority applicants. However, it did not object to the lower index score requirement for Black and Mexican American applicants. The court also used information about test scores and grades to determine that the plaintiffs were not denied admission as a consequence of the school's affirmative action program. The data showed that 109 resident white applicants with index scores lower than Cheryl Hopwood's had been admitted to the school. Further, 67 resident white applicants with index scores lower than the other three plaintiffs had been admitted (Hopwood 861, F. Supp. at 581). The plaintiffs appealed the district court's decision and the Fifth Circuit Court disagreed with the district court about the use of index scores. More importantly, the Fifth Circuit Court held that diversity could never be a compelling governmental interest in a public school of higher education. In other words, contrary to the *Bakke* ruling that race could not be used as the *sole* factor for admission, the Fifth Circuit ruled that the government could *never* consider race as a factor in college admission decisions. The Fifth Circuit ruling applies in the states under its jurisdiction—Texas, Louisiana and Mississippi. The Supreme Court denied a petition by the University of Texas to review the case.

Further Litigation Issues

Because the Supreme Court refused to hear an appeal of the Fifth Circuit's ruling in *Hopwood*, its long-term implications remain unresolved. In the meantime, challenges based on similar premises, that is, one or more white applicants were denied admission while minority applicants with lower test scores and/or grades were accepted, continue to mount. Two lawsuits filed against the University of Michigan—one by white students rejected for admission to its undergraduate program and the other by white students rejected by its Law School—and one lawsuit filed by a white student rejected by the University of Washington School of Law are still unresolved at the time of this writing.

A common theme across these cases is the use of the quantifiable variables of test scores and prior grades in making admission decisions. The complaints, alleging violations of the fourteenth amendment, arose from actual or perceived differential treatment of scores and grades between white applicants and minority applicants. Courts have found using race as a determinative criterion in college admissions is a violation of the Fourteenth Amendment. Unfortunately, in the emotions of the debate, test scores and prior grades have taken on meaning and significance beyond their actual value or intended use. Among opponents of affirmative action, test scores and grades have become a surrogate for merit, while among proponents, they represent a barrier to equal opportunity.

Some admission programs aimed at increasing diversity in their schools have become vulnerable to legal challenges, at least partly as a consequence of over-reliance on test scores and grades. This over-reliance has also fueled the efforts of the popular press to turn the debate from one of equal opportunity to one of abandoning merit and academic standards. Test scores and grades are portrayed as seemingly objective measures that reflect some combination of hard work and achievement. Their limitations for such use are either misunderstood or purposely

ignored. Changing societal perspectives made the time right in 1954 for both the courts and the public to re-examine the doctrine of separate but equal (which it did in response to *Brown vs. Board of Education*). Similarly, the mood of society in the 90s reflects near obsession with the concept that meritocracy, academic standards and fairness are compromised when race becomes a factor in admission decisions. Additional research and scholarly analysis would be helpful in refuting the notion that tests alone provide a reliable and precise measure of either merit or academic standards. Such work would include, but not be limited to, gathering and communicating data for the purpose of demonstrating (1) the legitimate uses of tests, (2) the limitations of tests even when used legitimately, and (3) the deleterious consequences of using them for purposes for which they are not valid. It also should include broader definitions of merit as well as empirical links between those definitions and outcome measures such as academic success, professional contributions, and societal benefits.

Technical Issues in Equity and Assessment

Large differences in average performance on standardized admission tests between white test takers and test takers from some minority groups, especially those from black, Hispanic, and American Indian groups, have been widely documented across the spectrum of undergraduate and graduate admission testing programs. The largest differences tend to be between black and white test takers. Those differences are of a magnitude of approximately one standard deviation in each of the admission testing programs. The average score differences between white students and minority students have led to heated debates about the validity and utility of the tests, particularly with regard to admission decisions for minority group applicants. Other key technical testing issues related to the general questions about test validity are questions about test bias and questions about susceptibility of test scores to coaching.

Concerns about these issues are often articulated by testing critics in the following three statements about the role of testing in the higher education admission process.

- Standardized admission test scores do not add any useful information to the higher education admission process.
- Admission tests are biased against test takers who are not white and not male.
- Admission tests are highly susceptible to coaching, thus undermining their validity and adding to the test bias issue because test preparation is not as available to economically disadvantaged test takers as it is to others.

Empirical research generally does not support these statements. The extensive base of research on test validity typically concludes that the major higher education admission tests are valid for the limited purposes for which they were developed. The primary purpose of those tests is to measure selected "developed reasoning abilities" that are important to achieving academic success.

Research findings generally refute suppositions both that test bias provides the primary explanation for the observed performance differences among test takers from different ethnic groups and that the tests systematically disadvantage minority applicants to higher education institutions by under-predicting their subsequent academic performance. The data also show that the gains realized from test preparation are modest; they fail to show that test taker participation in test preparation activities lowers the predictive validity of the tests. This section will summarize the existing body of research in the area of test validity and its related issues, and also will point to limitations in that research and suggest important issues in need of further research.

Predictive Validity

The application requirements of the vast majority of undergraduate, graduate, and first professional school programs include scores on one or more of the standardized admission tests previously described. Admission committees typically use those scores to draw inferences about applicants' future academic performance, usually first year grades. The usefulness of test scores for that purpose is at the heart of the debate about test score validity. The term *validity* is used to describe the accumulated evidence to support the inferences that are made from the test score(s). One form of that evidence, referred to as predictive validity, is demonstrated when a statistical relationship between test scores and subsequent academic performance is established. The measure of academic success most often employed in predictive validity studies is first year grades. First year grades are not the only criteria that could be used to establish predictive validity evidence, but they are a popular choice for several reasons. First year grades become available within a year of the start of school, while other criteria may require two or more years before a study could be conducted. Additionally, first year grades are based on a composite of academic performance accumulated over a year of school, thus allowing differences in course difficulty and grader stringency to average out. Finally, because many core courses are taken during the first year of school, the content on which the grade point average is based tends to be more consistent across students than it is at any later time.

Evidence to support the validity of the frequently used higher education admission tests has been fairly well established. Most major testing programs provide a free validity study service for schools using their tests, and hundreds of schools participate each year. The data analysis options vary somewhat from program to program, but all provide at least a correlation between first year grades as the criterion and each of the following: test score, prior academic grades (either high school grades or undergraduate grades, depending on whether the criterion grades are for undergraduate or for graduate or professional school), and the combination of the two. The results of those studies are relatively consistent across testing programs. The mean of the correlations obtained across hundreds of studies conducted for individual colleges is approximately .42 for Verbal and Mathematical SAT scores used together to predict first year grades in college (Donlon, 1984, p. 142). Among 685 colleges predicting freshman GPA using SAT-Verbal and SAT-Mathematics scores during the period 1964 to 1981, 75 percent of the correlations exceeded .34 and 90 percent exceeded .27 (Donlon, 1984). Among more than 500 colleges using the ACT during 1989-90, the median correlation between first year grades in college and the four ACT scores is .45 (American College Testing Programs, 1991, p. 17). Similarly, the 1993-94 data, based on 361 participating institutions, produced a median multiple correlation between college grade average and the four ACT Assessment scores of .43 (American College Testing Programs, 1997, p. 56).

The correlations of test scores with first year grades in graduate and professional schools tend to be as high or higher. Median correlations between .21 and .41 have been reported for the GMAT, LSAT, MCAT, and GRE General Test (Livingston & Turner, 1982; Wightman, 1993; Wightman & Leary, 1985). In addition to the routine testing-program-sponsored validity studies, many independent studies validating the tests used in admission decisions have been reported in the literature (see, for example, Kramer & Johnston, 1997; Pharr et al, 1993; Zwick, 1993). The results from independent studies are consistent with those reported by the testing programs.

The correlation coefficients provide evidence of the validity of the tests, but the meaning of the correlation coefficient is sometimes misunderstood by consumers and test score

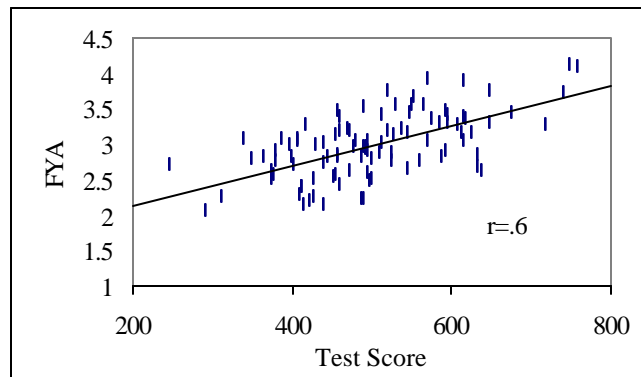
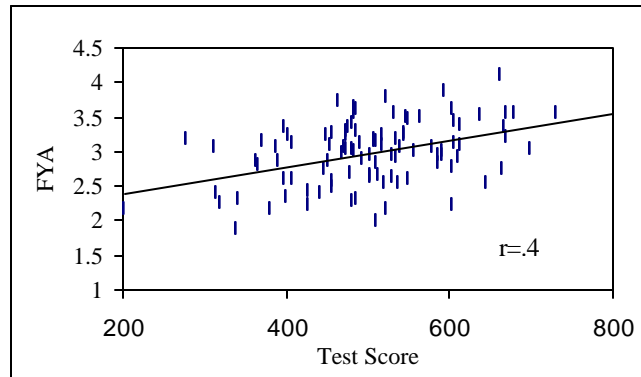
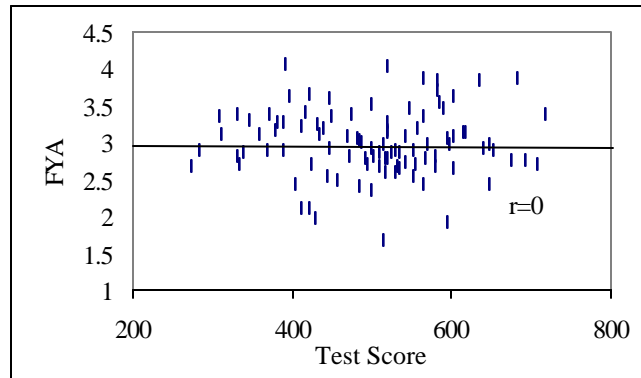
users who have no training in basic statistics. That misunderstanding at least partly explains why some continue to raise questions about the predictive validity of admission tests despite the extensive research supporting it. It may also explain why others respond to claims of substantial validity evidence by calling on test scores to do more than they were ever intended to do. A brief explanation and illustration of correlation coefficients as they are used to evaluate the predictive validity of admission tests follows in order to help explicate their use and interpretation.

When a test score is used to predict subsequent academic performance (e.g., first year grades), a prediction equation that quantifies the relationship between test score and FYA is developed. The prediction equation can be represented by a straight line on a graph that shows for every student a single point that is determined by the student's (1) score on the predictor (e.g., the test score) and (2) score on the criterion (e.g., FYA). The exact position of the line on the graph is calculated so as to minimize the (squared) distance of every test/FYA-point from the line. The correlation coefficient is an indicator of how well the line represents the points on the graph. Correlations can take on values from zero—meaning there is no relationship between two variables—to one—meaning there is a perfect one-to-one correspondence between two variables. That is, when the correlation coefficient is 0, there is no relationship between the two variables depicted on the graph. The closer the correlation is to 1, the closer the points are to the line. And, the closer the points are to the line, the more accurately the predictor (e.g., test scores) predicts the criterion score (e.g., FYA). Figure 1 illustrates the relative meaning of correlations of different magnitudes. It presents three examples of data points and best fitting prediction lines for hypothetical samples of 100 students who have both test score data and first year grades. In each example, test score is the predictor and FYA is the criterion. The test scores are reported on a scale of 200 to 800, with a mean of 500 and a standard deviation of 100. First year grades are reported on a scale of 1 to 4 with a mean of 3.0 and a standard deviation of .45. Three different correlations coefficients (r) are represented in the illustrations-- 0.0, 0.4, and 0.6. A correlation value of 0.4 was selected for illustration because it is close to the median correlation reported by most higher education admission testing programs. A value of 0.6 is included because it represents the upper end of individual school correlations reported among the different testing programs. A value of 0.0 provides a baseline against which to examine the other relationships.

Notice that when the correlation is equal to zero, the prediction line is parallel to the X-axis (the axis on which the test scores are denoted) and crosses the Y-axis (the axis where first year grades are denoted) at the value equal to the average FYA. That is, if there were no relationship between test scores and grades, the prediction line would predict the mean FYA for every student, regardless of test score. When the correlations increase, the line slopes upward, so that students with higher test scores are predicted to earn FYAs higher than the mean FYA, and students with lower test scores are predicted to earn FYAs lower than the mean FYA. Notice also how much the points are scattered around the prediction line in both the second and the third illustration relative to the scatter in the illustration in which the correlation is zero. Each point above the line represents a student whose FYA is higher than was predicted by her test score. Each point below the line represents an FYA lower than predicted. The closer the points are to the prediction line, the more accurate the prediction of FYA based on test score. The data presented in Figure 1 illustrate the accuracy with which test scores predict subsequent academic performance when correlations are of the magnitude typically reported by higher education admission testing programs. The figures clearly show that prediction based on test scores is superior to simply predicting the average FYA for every applicant (the best alternative if there were no relationship between the two.) The figures also illustrate the lack of precision for an

Figure 1.

Illustration of scatter of points representing test score and FYA around the best regression line for selected correlation values



individual applicant. The plots include many points for which lower test scores are associated with higher FYAs and higher scores are associated with lower FYAs. That is partly why the producers of the tests issue warnings that test scores should not be used in isolation to make admission decisions. It is also partly why college application materials advise applicants that admission decisions are based on a variety of criteria, only one of which is the test score.

An alternative way to use and interpret the correlation coefficient is to square it. Squaring the correlation provides a description of the amount of the variability in the criterion score (e.g., first year average) that can be attributed to the predictor (e.g., test score). The meaning of the squared correlation is difficult to grasp and one that has often misinterpreted. The squared correlation (technically referred to as the coefficient of determination) *does not* describe the percentage of students whose grades are accurately predicted. The Nairn/Nader report (1980) is one example of this type of misinterpretation of the squared correlation. The following example may help clarify this concept. If the correlation between SAT scores and FYA (or ACT scores and FYA) is 0.4, then 16 percent (i.e., 0.4 squared) of the variance in FYA is accounted for by the variance in SAT (or ACT) scores. A way to interpret the meaning of the squared correlation coefficient is to imagine a situation in which there was no variability in the test score. For example, if a sample of students who all had the same test score were selected from the total population of students, the variance in FYA for that sample would be expected to be 16 percent smaller than the variance for the total population of students.

Testing specialists have long agreed that the squared correlation is of limited value in interpreting the usefulness of admission tests for selection purposes (see, for example, Brogden, 1946 and Chronbach and Gleser, 1965). This is because the correlations need to be interpreted within the framework of the limitations of the data from which they were computed. Thus, even though from a purely statistical perspective, correlations of the magnitude found between test scores and first-year grades are somewhat modest, they should not be dismissed off-handedly. The correlations reported in typical predictive validity studies are actually a reduced estimate of the true relationship between test scores and subsequent academic performance. The reduction is a statistical consequence of using the test score as a predictor when it also was a factor on which selection of the students was based. This phenomenon is known as *range restriction*. The correlation coefficient is related to the amount of variability (or roughly, the range of test scores) among students in the validity study sample. When test scores are used to help select applicants for admission, the range of test scores among first year students (those who have attended the school and earned a GPA to be correlated with the test score) is less than the range among all of the applicants. The more selective the school is and the greater the emphasis on test scores in the admission process, the larger the under-estimate of the correlation.

Critics of the use of test scores in the admission process often note that even though the median correlation between test score and subsequent grades are positive across all the testing programs, there is a substantial amount of variability from school to school. In fact, a handful of schools in almost every testing program's summary report show zero or slightly negative correlations. Those critics use the variation in correlations among different schools to question the accuracy of the claims of test validity. However, an alternative explanation for the observed variability in validity estimates is statistical artifact. The variability is at least partly attributable to the range restriction found within different schools. A second statistical artifact, sampling fluctuation, also accounts for a substantial proportion of the variability in validity estimates obtained among different schools (Linn, Harnisch, & Dunbar, 1981). Another statistical artifact contributing to low and negative correlations is the use of a compensatory model in selection (i.e. letting either high test scores compensate for low grades or high grades

compensate for low test scores). See, for example, Wightman (1993) demonstrating the impact of the compensatory model on the validity of LSAT scores.

Despite the existence of literally thousands of studies of the nature described above, which support the *validity* of standardized admission tests as predictive measures of first year grades, their *utility* should not simply be accepted without question. The technical question of whether test scores are statistically related to an outcome of interest (e.g., first year grades) is not sufficient to determine *how* the test should be used in the admission process. Individual schools need to evaluate (1) the importance of the validity study criterion in their selection process; (2) whether there are other factors that predict the criterion as well or better than test scores; and (3) what impact using the test score might have on their ability to attract the kinds of students they seek as well as to fairly select among those who apply. Consider some examples.

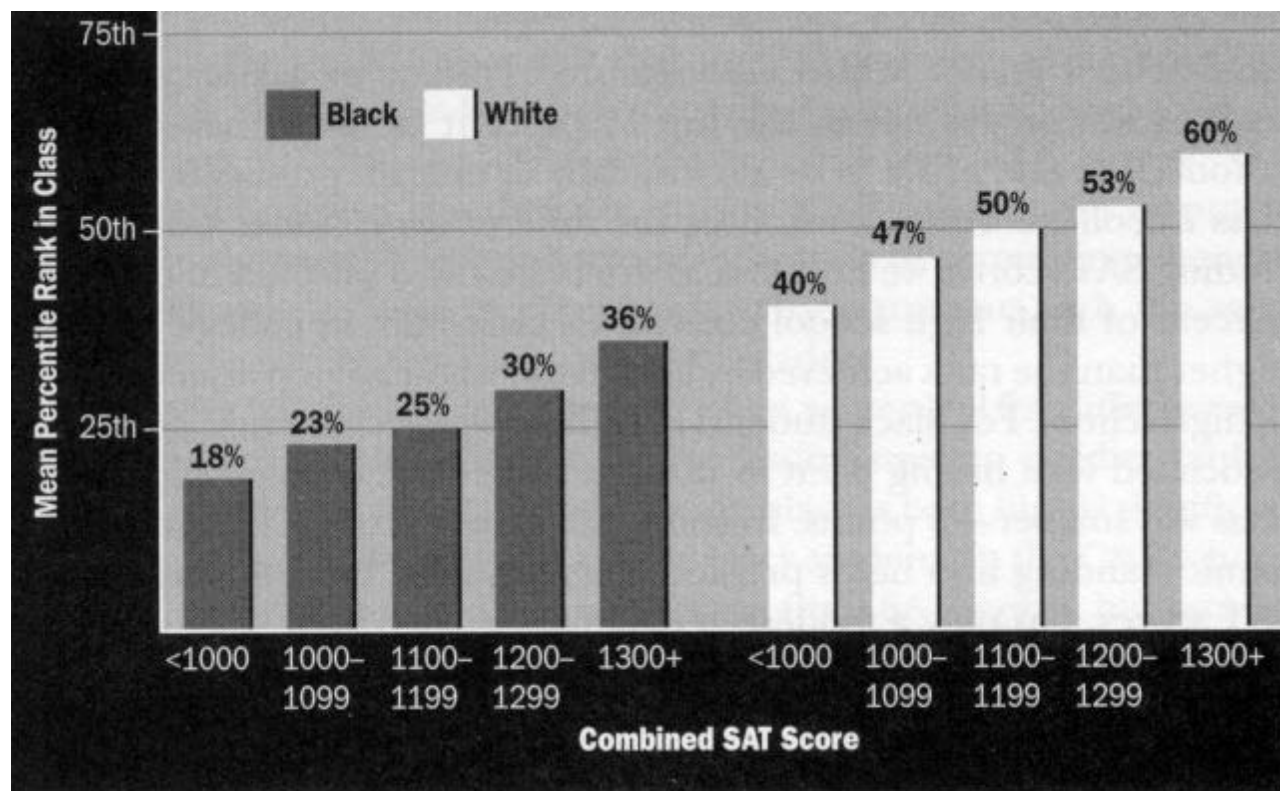
Bowen and Bok (1998) recently examined the utility of SAT scores to predict rank in class based on students' cumulative four year GPAs. They estimated the relationship separately for black and for white students attending the 28 academically selective colleges or universities that are part of the *College and Beyond* database. (See Bowen & Bok, 1998, p. xxvii-xxix for a listing of participating schools.) Like other studies cited previously, their analysis provided clear support for the validity of the test. Further, they determined that the relationship (i.e., higher test scores associated with higher class-rank) was found both for white and for black students, again refuting the claim that test scores are not valid predictors for black applicants to higher education. Importantly, they also noted that the relationship “remains after we control for gender, high school grades, socioeconomic status, school selectivity, and major as well as race” (p.74.) Their graphical illustration of that relationship (Bowen and Bok, 1998, Figure 3.10, p. 75) is reproduced in Figure 2. The figure not only illustrates the validity of the test, but also helps demonstrate the distinction between utility and statistical significance. Specifically, despite the statistical significance between SAT score and class rank, Bowen and Bok found that for white students, “an additional 100 points of combined SAT score is associated, on average, with an improvement of only 5.9 percentile points in class rank.” The same amount of score gain “is associated with a class rank improvement of only 5.0 points for black students” (1998, pp. 74-75).

Other studies demonstrate that prior grades correlate as higher or higher than test scores with subsequent grades in undergraduate school. For example, studies based on both SAT and ACT data showed that high school record is typically the strongest single predictor (see, for example, Donlon, 1984; Linn, 1982a). There is more of a tendency for test scores to be the stronger predictor in graduate and professional schools (e.g., Wightman and Leary, 1985; Wightman, 1993) when first year grades are used as the criterion. Regardless, it is important to note that test scores and grades are not completely redundant predictors. All of the studies show that test scores and prior grades used in combination are more highly correlated with subsequent academic performance than is either predictor alone. Further, limited data suggest that even in testing programs in which test scores were stronger predictors of first year grades than were prior grades, when the criterion is academic performance beyond the first year, the contribution of prior grades is greater than that of test scores (Powers, 1982).

Finally, some researchers hold that although the data generally show that higher education admission tests are valid predictors of later academic performance, the amount of additional information provided by the scores pales when evaluated relative to the various costs of requiring the test of all applicants. Most notably, Crouse and Trusheim (1988) posited that “SAT scores can provide important information only when they lead admissions officers to

Figure 2.

Mean percentile rank in class, by combined SAT score and race, 1989 entering cohort.



Note. From The Shape of the River: Long term consequences of considering race in college and university admissions (p.75), by W.G. Bowen and D. Bok, 1998. Princeton, NJ: Princeton University Press.

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make admission decisions they would not have made without SAT scores” (p. 6). To support their position that admission test scores are of negligible utility, they calculated predicted GPA based on high school rank alone, then on high school rank and SAT score combined. They reported the correlation between the two predicted first year undergraduate grades to be .88. Their analyses also demonstrated that using high school grades alone would change the admission decisions for only a very small proportion (approximately 10 percent) of the applicants.

Bias

Questions about test validity are often raised in response to concerns about whether admission test scores can be used to evaluate minority applicants in the same way they are used to evaluate white applicants. The various components of those questions usually are all related to the issue of bias. “Bias is defined as the systematic over- or under-estimation of the true abilities of a group of examinees formed according to some demographic variable such as sex or ethnicity” (Scheuneman and Slaughter, 1991, p. 1). Questions about bias are most often raised and debated in reaction to the large observed differences in average performance among test takers from different ethnic groups. But, importantly, the definition of bias is more than a definition about the magnitude of observed average score differences. That is, while large between-group score differences could be symptomatic of test bias, score differences are not sufficient by themselves to establish the existence of test bias.

Research on bias in testing has occupied substantial space in the testing literature in recent years. This research generally takes two foci. One focus is on individual test questions; the other is on differential validity of the test when used to predict future performance among test takers from different ethnic groups. Research efforts targeting individual test questions typically seek both statistical and non-statistical procedures to identify and eliminate questions on which test takers from different subgroups who have similar ability on the skill being measured have different probabilities of answering them correctly. In the current testing jargon, this phenomenon is referred to as differential item functioning (DIF). Subsumed in item-level bias analyses is the concept of sensitivity review. That is, each test item is reviewed by a panel that is representative of the diversity of the test takers to screen items for insensitive or offensive subject matter or treatment. A primary goal of sensitivity review is to eliminate items that might disadvantage individual test takers by eliciting emotional reactions or responses. In contrast to the sensitivity review, the statistical detection methods identify differentially functioning items independent of any external characteristics of the items. Incorporating a combination of the two procedures in routine test development activities has resulted in considerable improvement, from the perspective of item bias, in the overall make up of standardized test forms. The most egregious test questions, for example those that dealt with subject matter such as slavery, abortion, and stereotypes of particular ethnic groups, are no longer found on standardized admission tests that routinely undergo DIF analysis and sensitivity review. Critics who cite examples of flagrant item bias or insensitivity problems typically use items from test forms developed and assembled prior to the introduction of bias detection methods in the 1980s (e.g., Espanoza, 1993).

The second focus of the bias research is on questions about differential validity and differential prediction. These questions take two related forms:

- Are test scores less valid when used to predict subsequent academic performance of non-majority applicants than they are for majority

applicants? For example, is the correlation between test scores and first year performance in undergraduate or graduate/first professional school different for different identifiable groups of students?

- Are test scores systematically unfair to non-majority applicants? That is, do some groups systematically perform better than they are predicted to by the tests?

There is a fairly extensive literature on this topic, although some of the work is dated and needs to be updated or at least replicated. Overall, the research in this area suggests that test scores and previous grades are valid for black and Hispanic test takers. But there also is some evidence of differences in the magnitude of those validities both across testing programs and across different types of schools within testing programs.

Research in the area of differential validity and differential prediction often reports that the admission test over predicts for minority test takers. *Over-prediction* refers to the comparison of the FYA predicted by the test compared with the observed FYA. That is, when the test over-predicts, actual first year grades earned by the test takers tend to be lower than the FYAs predicted by their test scores. If the relatively lower average test scores earned by minority examinees were simply a result of test bias, then under prediction, i.e., actual FYAs that were higher than the FYAs predicted by the test scores, would be an expected outcome. Explanations of the findings of over prediction must not mask the important distinction between *average* results and *individual* results. Specifically, while most research shows that on average test scores tend to over predict future FYAs for black test takers, this finding does not imply that test scores over predict performance for each individual black test taker. See Wightman (1998) for graphic representations of the black and white law school students whose actual first year performance in law school exceeded their predicted performance.

In a comprehensive review of the literature on differential validity and differential prediction, Linn (1990, p. 310) provided the following references, summaries, and generalizations about research findings with regard to minority and majority groups:

1. Predictive validities (American College Testing Program, 1973; Breland, 1979; Duran, 1983; Linn, 1982a; Ramist, 1984)
 - (a) tests and previous grades have useful degree of validity for Black and Hispanic as well as White students
 - (b) typically lower for Black than for White students at predominantly White colleges
 - (c) at predominantly Black colleges validities are comparable to those [for freshmen in general] at predominantly White colleges
 - (d) typically slightly lower for Hispanic than for White students
2. Differential prediction (American College Testing Program, 1973; Breland, 1979; Duran, 1983; Linn, 1982a; Ramist, 1984)
 - (a) freshman GPA typically over-predicted for Black students
 - (b) over prediction usually greatest for Black students with above average scores on predictors and negligible for students with below average scores on predictors
 - (c) over prediction found for Hispanic students, but less consistently and by smaller amount

3. Statistical artifacts may contribute to over prediction (Linn, 1983).
4. Differential course taking patterns may mask the amount of over prediction to some extent and partially account for the lower validities found for minority students (Elliott & Strenta, undated).
5. Inferences about bias based on differential validity or prediction findings require assumptions that grades are themselves unbiased measures.
6. Results for graduate and professional schools, while more limited, are generally consistent with those at the undergraduate level except that there is less indication that predictive validities are lower for minority group students (Braun and Jones, 1981; Powers, 1977; Linn, 1982a)."

Studies more recent than those reviewed by Linn, though limited in number, continue to confirm the earlier findings about differential predictive validity. For example, Young (1994) confirmed that the phenomenon still existed for a sample of 3,703 college students. He concluded that for women, but not for minorities, the difference in predictive validity appeared to be related to course selection. Similarly, Noble (1996) showed that both ACT scores and high school grade point averages slightly over predicted success in standard freshmen courses for black students relative to white students and for men relative to women. Wightman and Muller's (1990) analysis of data from law school students found no differences in validity for black, Mexican American or other Hispanic students compared with white students. Their data also continued to demonstrate that on average, LSAT scores, used alone or in combination with UGPA, slightly over-predicted first year averages in law school for black, Mexican American, or other Hispanic students.

Implicit in the analyses of differential validity and differential prediction described in this section is the assumption that the criterion (typically first year grades) is unbiased. Currently, research to test the accuracy and the impact of that assumption is lacking. A key factor that is not explained by any of the studies of differential prediction is the cause for the over prediction. Linn (1990) ascertains that "it seems likely, however, that the result is due to many factors, including both statistical artifacts and educationally relevant factors." Testing organizations and testing professionals have focussed much attention on uncovering and understanding the statistical artifacts, as evidenced in the research cited in this section. The greatest shortage of current research seems to be in the areas of how to remedy the educationally relevant factors and how to integrate information about remedies with the test development efforts in order to provide new and more meaningful assessment options.

Another important consideration in dealing with question of bias in standardized testing is the bias in selection that results from over-reliance on test scores in the admission process even if there is no bias in the test scores themselves. Linn (1990, p. 320) emphasizes that "because the predictive validity of test scores and previous academic records are modest and the group differences in average scores are large, selection based solely on the basis of these quantitative predictors would have substantial adverse impact for Black and Hispanic applicants and exclude many minority students who would succeed if given an opportunity." Research that examined Linn's hypothesis is reviewed in the section on the consequential basis of test validity.

Coaching

The general topic of test validity is also related to the topic of test preparation or coaching. Coaching is used as a generic term here to refer to any of a broad number of activities ranging from relatively short-term review of test familiarization materials to extensive long-term

instruction in the subject matter covered on the admission test. Research suggests important distinctions between the two extremes not only with respect to their effect on subsequent test performance but also their relationship with later academic achievement.

Virtually all of the higher education admissions testing programs provide some test familiarization materials free of charge to prospective test takers. They also market a wide array of test preparation materials, ranging from previously used intact test forms to computer-based instructional material. Printed and computer-based test preparation materials are also offered by commercial organizations that are independent from the organizations that produce the tests. In addition, a number of not for profit as well as commercial test preparation courses are offered. The cost of the available test preparation materials and services range from only a few dollars for the purchase of a previously used test form to nearly \$1000 for enrollment in some commercial test preparation courses. One consequence of the differential costs associated with test preparation options is that various options are not equally available to students with different financial resources. As important, there is some evidence to suggest that students from different ethnic/racial groups do not equally understand the value of test preparation. For example, McKinley (1993) found that white LSAT takers tended to use the free and low-cost test preparation materials offered by the test publisher more than black, Mexican American, or Puerto Rican test takers used them. He also found that white test takers tended to use a larger number of different methods of test preparation than did test takers from other subgroups.

The import of differential access to and use of test preparation opportunities is primarily related to the possible positive effect of test preparation on subsequent test performance. Two meta-analyses of the large number of studies dealing with the effect of test preparation on subsequent test performance (Messick & Jungeblut, 1981; Powers, 1993) both agree that test scores have been improved as a consequence of engaging in focussed test preparation, but that the average gains are generally modest. Messick and Jungeblut estimated that the first 20 hours of coaching were associated with an increase of approximately one fifth of a standard deviation (19.2 points) on the SAT mathematics score. The same amount of coaching time was associated with an increase of less than one tenth of a standard deviation (8.9 points) on the SAT verbal score. A study of the effects of professional coaching for African-American students on the ACT showed similarly modest gains (Moss, 1995.) That is, following a six-week coaching course, the average increase among the study participants was 1.34 points. Whether gains of these magnitudes are worth the cost and the amount of preparation time required in order to achieve them is an individual decision.

A related question of interest is whether test takers from different ethnic groups benefit differently from exposure to short-term or moderate-term coaching. The limited available research that specifically compared test score gain across different ethnic groups revealed little difference among ethnic groups in the benefits, as measured by test performance, realized from engaging in test preparation activities (Messick, 1980; Leary and Wightman, 1983; Powers, 1987.) In a study that looked exclusively at black students, Johnson (1984) evaluated results from a test preparation program sponsored by the National Association for the Advancement of Colored People. The program's purpose was to increase the number of eligible black college applicants by raising their SAT scores. The evaluation report's conclusions—that overall the program was effective, but the gains were modest—are consistent with other coaching research. Additionally, the results reported by Johnson were mixed across clinics. Students from San Francisco and Atlanta showed statistically significant increases in test scores, while increases of approximately the same magnitude among students from New York were not statistically significant.

Several researchers have raised concerns that even the modest score increases associated with short-term test preparation are a potential threat to the validity of the use of these tests for admission decisions (see, for example, Messick & Jungeblut, 1981; Linn, 1982b; Bond, 1989).

An early study that addressed this issue (Marron, 1965) found that coaching led to an over prediction of academic performance. However, Marron's results have been questioned, primarily due to the lack of statistical rigor in his design and analysis. Several subsequent studies (Powers, 1985; Jones, 1986; Baydar, 1990; Allaouf & Ben-Shakhar, 1998) suggest either that test preparation may enhance rather than undermine predictive validity or that coaching had no negative impact on the predictive validity of the admission test.

Test preparation questions that focus on long-term academic preparation are distinct from questions about short-term or moderate-term coaching. The admission tests are designed to measure academic skills acquired over an extended period of time. If the tests are valid for that purpose, examinees who did not enroll in or do well in rigorous academic courses that provide the fundamental preparation for a college education should be expected to earn lower test scores than do examinees who engaged in adequate academic preparation. Addressing problems of inadequate long-term academic preparation may be more difficult and elusive than are providing short-term coaching solutions, but defining the relationships between academic preparation and subsequent test performance, and developing appropriate intervention may also provide more lasting positive outcomes. In cases where shorter term coaching—particularly coaching that focuses on test taking strategies rather than underlying skills—results in score increases, Johnson's questions (1984) about whether improved SAT performance results in stronger college performance are central to concerns about coaching, test validity, and equity and fairness in the admission process.

There is research evidence to support the intuitive relationship between inadequate academic preparation and poor test performance (e.g., Chenowith, 1996; Pennock-Roman, 1988). There also is research demonstrating increased test performance among minority students who are appropriately guided into academic programs or courses that provide the necessary long-term academic preparation. For example, in her study of Hispanic students in post secondary education, Pennock-Roman (1988) not only found large differences in SAT scores between Hispanic and non-Hispanic white students, but also found that those differences were associated with the type of academic courses taken. She concluded that the adequacy of Hispanic students' test preparation was one of the important factors in their relatively poor test performance. More directly relevant to improving test performance are the results from evaluations of the Equity 2000 program. A primary goal of that program is to encourage school systems to direct their minority students into college preparatory mathematics courses. A demonstration project supported by Prince George's County, Maryland, showed that successful completion of high school algebra and geometry was an important predictor of achieving SAT scores that qualified students for college admission (Fields, 1997). The study indicated that programs like the one in Prince George's County are difficult to implement, but also that they promise results that justify the extra effort.

Consequential Basis of Test Validity

In his seminal work on test score validity, Messick (1989) explained the need to incorporate the value implications and social consequences of interpreting and using test scores into the overall concept of test validity. Messick suggested that this could be accomplished by “scrutinizing not only the intended outcomes but also unintended side effects—in particular, evaluate the extent to which (or, preferably, discount the possibility that) any adverse

consequences of the testing derive from sources of score invalidity such as construct-irrelevant test variance” (Messick, 1994, p. 3). Construct-irrelevant test variance refers to score variability that results from differences on factors that the test does not intend to measure. Cultural differences, language differences, and differential opportunity to learn (particularly in higher education admission tests that aim to assess skills that are independent of specific curriculum) could potentially contribute to producing construct irrelevant variance. A simple example of this concept would be a test intended to measure mathematics computation skills that is administered to examinees for whom English is a second language. If the task is presented through "word problems" or if the instructions are presented in language that is complex, low scores may reflect language limitations rather than low proficiency in the computational skills of interest.

The consequential basis of test validity is an issue for standardized higher education admission tests partly because the major tests used for admission purposes are “indeed culture dependent” (Linn, 1982b, p. 285). Messick’s depiction of social consequences as a validity issue has been a topic of controversy and debate within the measurement community (see for example, Linn, 1997; Mehrens, 1997; Popham, 1997; Shepard, 1997). The basis of the disagreement is whether the social consequences of test use fit appropriately under the validity umbrella; there is not disagreement that social consequences are an area that should be of concern to both test developers and test score users. Regardless of an individual’s position about its place within the validity construct, Messick’s representation has resulted in heightened attention to the issue of social consequences associated with test score use.

The consequences of over-reliance on test scores from the perspectives of achieving diversity in higher education and affording educational opportunity for economically disadvantaged applicants has been well documented. For example, Willingham & Breland (1977) maintained that strict reliance on standard numerical indicators would have an adverse impact on several minority groups. Evans (1977) provided empirical evidence to demonstrate that below the very top of the LSAT score range, the proportion of black law school applicants who were accepted exceeded the proportion of white applicants with the same scores. More recently, Wightman (1997) used law school application and admission decision data to demonstrate that basing admission decisions exclusively on numerical indicators (i.e., test scores and prior grade point averages) would substantially reduce the proportion of admitted applicants from selected minority groups. More importantly, the law school data showed that the majority of minority students who would have been excluded from law school succeeded when they were given an opportunity. That is, based on data from the fall 1991 entering class, no significant differences in graduation rate were found, within any of the racial/ethnic groups studied, between those who would have been admitted under the numerical model and those who would have been denied. The data on bar passage outcomes showed small differences between those who would have been admitted and those who would not within some, but not all, ethnic groups. The most compelling aspect of the bar admission data is that between 88 and 72 percent of minority law school students who would have been denied opportunity to enter law school under a numbers-only admission model were able to successfully pass the bar and enter the profession. Similar studies in other educational settings should be undertaken to help put the impact of selection based disproportionately on test score results into perspective.

Other social consequences resulting from heavy reliance on test scores in the admission process are less well researched. For example, little is known about the effect of lower test scores on decisions among tests takers with respect to whether to continue with the college application process as well as which schools to apply to. More research is required in several areas related to the social consequences resulting from test score use in higher education

admissions. Such research should distinguish between issues of distributive justice and true sources of invalidity in order to guide potential remedies that might be proposed in response to research results. Messick (1994) pointed out that “it is not that adverse social consequences of test use render the use invalid but, rather, that adverse social consequences should not be attributable to any source of test invalidity such as construct under-representation or construct-irrelevant variance” (p. 8). For example, to the extent that differences in test scores among members of different ethnic groups represent true differences in educational opportunity, heavy reliance on test scores would have adverse social consequences that are questions of distributive justice, but are not sources of invalidity within the test. Alternatively, to the extent that score differences are attributable to factors such as different tendencies to guess on multiple choice questions or to speededness factors on tests designed to be power tests, there exist sources of construct-irrelevant variance that impact the validity of the test.

Use and Misuse of Admission Test Scores in Higher Education

The majority of testing programs provide advice and warning to both test takers and score users about appropriate score use, emphasizing the limitations of those scores. Even so, there is concern about over-reliance on test scores in the admission process. The potential for misuse of test scores has been exacerbated by recent moves to pit concepts of merit and academic standards against the benefits of diversity and educational opportunity offered through affirmative action programs. Despite extensive evidence to the contrary, test scores are being portrayed as an accurate, objective indicator of merit. This section will review relevant research on appropriate and inappropriate use of test scores and other indicators of academic achievement in the admission process, and will examine the changing public attitude about test score use.

Reliance and Over reliance on Test Scores in Making Selection Decisions

The amount to which admission decisions rely or overly rely on test scores varies from institution to institution and also varies across undergraduate, graduate, and professional schools. University of Virginia’s Dean of Admission in 1997, John Blackburn, claims that “we see the SAT, and I think most colleges and universities see the SAT, as one factor among many that would be important in making decisions about students” (US News Online, 1997). Consistent with his assessment, national survey data confirm that admission test scores were not the only or even the primary factor that schools claimed influence their admission decisions in a national survey of admission practices. The major factors identified by schools and the importance attached to them are identified in Table 5. Grades in college preparatory courses received the highest percentage of ratings of ‘considerable importance’. These findings are consistent with the validity data previously reported, showing that high school grades are slightly better predictors of college performance than are test scores for most undergraduate schools. Only 47 percent of the respondents rated the importance of admission test scores as ‘considerable’ although another 38 percent rated their importance as ‘moderate’.

Despite statements by schools describing the way that test scores are used in the selection process, there is at least some empirical data suggesting the relationship between test scores and admission decisions might be stronger than is suggested above. A now well-known example is the documented account of the way that the University of Texas School of Law used LSAT scores and grades as reported in Hopwood (see page xx). There also are correlational data suggesting a strong relationship between test scores and admission decisions. Willingham (1988) reported a correlation of .37 between SAT score and undergraduate admission decisions and .36 between high school grade point average score and undergraduate admission decisions.

Table 5

Admission trends 1995: Factors influencing admission decisions

	Considerable Importance	Moderate Importance	Limited Importance	None
Grades in College Prep. Courses	80%	10%	7%	3%
Admission Test Scores	47%	38%	9%	6%
Grades in All Subjects	41%	40%	14%	5%
Class Rank	39%	33%	19%	9%
Essay/Writing Sample	21%	34%	24%	21%
Counselor Recommendations	19%	48%	23%	10%
Teacher Recommendations	18%	46%	23%	13%
Interview	15%	30%	34%	22%
Work/ Extracurricular Experiences	7%	35%	40%	17%
Ability to Pay	3%	7%	16%	73%
Personal Recognition Programs	1%	12%	41%	45%

Source: National Association for College Admission Counseling Admission Trends Survey, 1995

Wightman (1997) reported a correlation of .33 between LSAT score and law school admission decisions and .28 between undergraduate grade point average score and law school decisions. When the two variables were considered simultaneously, in a logistic regression prediction model, Wightman (1997) reported a correlation of .78 between predicted and actual admission decisions for white law school applicants. In other words, LSAT score and UGPA together accounted for approximately half of the variance in law school admission decisions. The correlations between predicted and actual admission decisions were substantially lower for other racial ethnic groups, suggesting that test scores and grades were less important to admission decisions for minority applicants than they were for white applicants. Even when the correlation data confirm a very strong relationship, correlations alone are not sufficient to determine whether scores are much more important factors than they are acknowledged to be or whether they are simply very highly correlated with the several other factors that were also taken into consideration. Another consideration that is related to the importance of test scores and grades is the number of applicants relative to the number of available places. Test scores most likely play a larger role in decisions within those schools that are the most competitive. More systematic research across a variety of schools and applicant populations would be required to empirically address those kinds of issues of use and over use of test scores in admission decisions.

Prior Grades as Alternatives to Test Scores

There is some information in the available research to suggest that test scores could be eliminated from the admission process. Predictive validity data presented earlier show that high school grades tend to be better predictors of subsequent college academic performance than do SAT or ACT scores. Further, data showed that although adding test scores to the prediction model improved prediction over grades alone, doing so had little effect with respect to changing the admission decision that would be made for individual applicants. But, in order to evaluate the consequences of abandoning the use of test scores in the admission process, some of the problems inherent in the use of grades alone also need to be considered.

Course grades are not always reflective of the skills, abilities, or knowledge of individual students. They can depend, at least partly, on the expectations of the instructors, the abilities of other students in the class, and the style and personality fit between student and teacher. Grades are frequently inflated, especially in schools at which a large proportion of students aspires to achieving admission to competitive institutions. Also, grades frequently are interpreted with respect to the academic reputation of the school at which they were earned. In a discussion of this topic, Linn (1982a) correctly points out that “the lack of comparability of grades from one school to another, from one curriculum to another, or from one college to another is a potentially important source of unfairness. The student who attends a school with less demanding standards for grades is given an advantage relative to his or her counterpart attending a school with more demanding standards” (p. 284). One way that schools have dealt with grades from differentially demanding schools is to use a school-based adjustment to an individual’s grades. The problem with that approach is that the student from a disadvantaged background who attended a high school or undergraduate school where students typically do not excel is penalized, thus reducing the value of his or her demonstrated achievements. Some research has sought to analyze the disadvantage to middle and lower middle class students that would arise from eliminating test scores from the admission process. Stanley (1977-78) remarked that the SAT had “a decidedly democratizing effect on certain kinds of selective colleges that, before the

advent of the SAT, tended to rely heavily for their students on high status private schools and the most academically prestigious public schools” (pp. 31-32).

Finally, data suggest that test scores are not so much the barriers to admission that many believe them to be. Analysis of law school data investigated the decision outcomes of a ‘numbers-only’ admission process. The data showed that, regardless of whether the process was modeled by UGPA and LSAT combined or by UGPA only, the consequence would have been a substantial reduction in the overall number of minority applicants who were offered admission to ABA-approved law schools (Wightman, 1997). Those results are consistent with the Crouse and Trusheim (1988) findings that an admission policy that rejected applicants with predicted grades below some predetermined level would lead to the same admission decision for most applicants regardless of whether high school grades were used alone or in combination with SAT scores.

Using Test Scores to Define Merit

It was not that long ago that public sentiment about testing focussed on its limitations and its overuse—particularly for purposes for which tests were not intended and were not validated. One example is the Nairn/Nader report (1980), which presented a major public-relations attack not only on the standardized tests used in higher education admissions, but also on the Educational Testing Service, as the maker and administrator of the majority of those tests. A variety of position papers were prepared among measurement professionals defending both tests and their appropriate use against Nairn/Nader’s and other earlier attacks against them. (See for example, Cronbach, 1975; Astin, 1979, Linn, 1982b).

The public mood about the role of standardized testing has shifted during the mid 1990s. Performance on standardized tests is now often portrayed as an impartial demonstration of academic merit (or lack thereof.) This shift in perception about standardized testing was at least partly fueled by the on-going debate about affirmative action and the ruling by the Fifth Circuit in *Hopwood*. The tension in American ideology between the concept of merit and the concept of distributive justice (or equality of outcomes) predates the *Hopwood* ruling. To most Americans, the concept of merit implies that people should succeed as a consequence of ability and hard work, not as a consequence of who they are or whom they know (Kleugel & Smith, 1986). In the abstract, this definition of merit frames it as a neutral concept that is independent of the emotional or political debate of affirmative action. During much of the affirmative action debate, little attention was paid to developing a definition of merit that could be embraced by the general public. The *Hopwood* ruling, and the media reporting of it, have had a role in formulating such a definition for the public. That is, the form of the complaint, the court’s response to it, and the media’s representation of the court’s decision imply that test scores and grades are the over-riding determinants of who is ‘entitled’ to the limited resources in higher education. Opponents of affirmative action have seized this definition with zeal. Columnist John Leo (1997) lamented examples of admission procedures based on practice other than ranking applicants by test scores and grades as signs of “the gathering assault on good grades, test scores, and nearly all known indicators of merit and academic achievement” (p. 22). He goes on to attribute efforts to reduce the emphasis on test scores in the admission process as “drummed up to protect the excess of an affirmative action movement in deep trouble with the courts and the American people.” With an opposing view, Harvard law professor Christopher Edley Jr. chides critics of affirmative action for treating “paper and pencil tests as if they were complete and accurate measures of merit” as well as for “speak[ing] of preferences with robotic regularity because polling shows that the public generally supports affirmative action while opposing preferences”

(December 7, 1997, Final Edition).

The measurement community has never suggested that test scores could or should serve as a surrogate for merit. As noted previously, that community has been both clear and forthcoming with regard to the limitations of test scores and to the necessity of looking at a variety of factors in making admission decisions. Proponents of using test scores as indicators of merit ignore important contributions that diversity among the student body makes to the educational experience of all students. Consequently, they fail to identify potential to bring diverse perspectives and experiences to the educational setting as a characteristic ‘meriting’ admission. In responding to Initiative 200—an anti-affirmative action initiative in the state of Washington—the regents there unanimously approved a statement that included the following: “Among the educational resources the university has to offer, is a diverse student body” (Carson, the News Tribune, January 18, 1998). Although many educators agree that a diverse student body enhances educational experiences by sharing broader perspectives and challenging assumptions, there is limited formal research to support these conclusions. See Chapter x for a review of literature and discussion of the existing research. More systematic objective work is needed to define and document the concept of merit beyond the narrow confines of test scores and grades.

The Future of Admission Testing in Higher Education

Particularly in the wake of *Hopwood* and California's Proposition 209, the current use of standardized test scores in the admission process needs to be examined against a variety of alternatives. These alternatives range from eliminating the use of scores altogether to a major reconstitution of the content and format of admission tests and to the way that scores from those tests are developed and reported. This section will identify various options to routinely relying on scores on traditional multiple-choice paper and pencil admission tests as well as summarize and synthesize current and on-going research that evaluates these alternatives.

Eliminating the Use of Test Scores in the Admission Process

Over-reliance on standardized tests, as well as potential negative consequences of test scores on applicants' decisions about if and where to apply to college or graduate school, became a concern to higher education long before the current political anti-affirmative action climate emerged. In the mid 1980s, Bates College, Union College, and Middlebury college retracted their requirement that applicants submit SAT scores as part of the application process, allowing them to substitute alternative achievement test scores including the ACT. Following that decision, Bates undertook a five-year study comparing Bates GPAs of students who submitted SAT scores with the GPAs of students who did not. They found no difference in GPA at Bates as well as slightly lower attrition rates for non-submitters compared with submitters (Bates College, 1998). So, in 1990, Bates further revised its policy to make the submission of any admission test scores optional for their applicants. Bates faculty cite the following reasons for the decision: inconsistent prediction of academic performance by test scores; inflated perceptions about the importance of test scores in the selection process; and two ethical issues related to the use of test scores--the possibility that test scores place students from multicultural, rural, or financially depressed backgrounds at a disadvantage and the misdirected energies of teachers and students to the activities of test preparation (Bates College, 1998). Research related to each of their concerns was reviewed in earlier sections of this chapter.

The decision by Bates College did not result in widespread adoption of optional test score policies among other colleges. Only about 200 colleges and universities no longer rely on standardized testing for their admission criteria (Rodriguez, 1996). The sheer volume of applications to be processed, particularly at large state universities, is one reason for the continued use of standardized test scores. For example, Dr. Ricardo Romo, Vice Provost, UT Austin, in a discussion about schools that have abandoned use of standardized tests as an admission criterion noted that most of them are smaller colleges and universities. At UT, which receives 20,000 applications per year, test scores have served as “another benchmark” (Rodriguez, 1996). Another reason for continued use is the utility of the scores when they are used appropriately. John Blackburn, Dean of Admissions at the University of Virginia, reported that the SAT is “a measure that shows us how students can solve problems in quantitative or mathematical areas on one section, and then how well they use the language in English.” He acknowledged that “we at the University of Virginia have never discussed eliminating the requirement or making it optional” (U.S. News Online, 1997)

Recent developments in California as well as in the Fifth Circuit may bring some change in the number of schools requiring applicants to submit test scores as well as in the way test scores are used in many selection processes. For example, a recommendation to eliminate the use of the SAT as an entrance requirement was included in the recent report of the University of California’s Latino Eligibility Task Force. In Texas, some schools already have reconsidered their use of standardized test scores, often substituting the practice of basing admission on test scores with the policy of automatically admitting the top 10 percent from each high school. In fall 1997, the University of Texas completely abandoned its policy of automatically admitting students based only on their test scores. Previously, a score of 1250 or higher on the SAT resulted in automatic admission (Rodriguez, 1996).

Alternatives to multiple-choice standardized paper and pencil assessment

The key factors that influenced the growth of the college admission-testing program at the beginning of the twentieth century remain factors in their use today. Specifically, curriculums vary substantially among different secondary schools and grading standards are inconsistent and can be unreliable. Among the most rigorous and competitive colleges and universities, selection committees seek indicators to help assure that applicants are properly prepared to undertake the required work. They also seek measures of relative academic potential as one factor to help them choose among a pool of qualified applicants whose number exceeds the available places in the class. While one possibility might be to eliminate the use of standardized tests altogether, forcing schools to explore other options to fairly and reliably indicate the student characteristics they seek, another would be to develop assessment alternatives to replace or supplement the traditional multiple-choice standardized paper and pencil test.

Alternatives that take the form of changes in test format, content, and mode of presentation have been proposed as possible revisions or extensions to reliance on standardized multiple-choice higher education admission tests that began more than a half century ago. Considering alternatives is especially appealing in response both to the expansion of educational opportunity nationwide that has occurred over the past 50 years and to the increasingly multicultural society that is currently served by higher education. Sedlacek and Kim (1995) noted that “if different people have different cultural and racial experiences and present their abilities differently, it is unlikely that a single measure could be developed that would work equally well for all” (p. 1).

An alternative to the multiple-choice format that has received substantial attention from both the testing community and the educational community in recent years is performance-based assessment. The National Center for Fair and Open Testing (a.k.a. FairTest) has long been an advocate of replacing the SAT, ACT, and similarly structured graduate and professional admission tests with “performance based assessments, such as teacher observations, essays, portfolios, and open ended questions that encourage real thought” (Natale, 1990). In performance assessment, judgments are made about test takers’ knowledge and skills from direct observation of their performing the tasks to be assessed or from inspection by trained evaluators of their work products. Proponents of performance assessment expected that this assessment alternative would be devoid of the bias believed to be manifest in the traditional multiple choice test format. Unfortunately, the research results do not suggest that between-group performance differences disappear when performance assessment tools are used to evaluate academic skills and accomplishments (Linn, Baker, & Dunbar, 1991). Adding a performance based component to traditional assessments also failed to reduce group differences in observed scores. For example, an Analytical Writing Assessment component was recently added to the GMAT. Simulations to determine which applicants would be offered admission suggested that the addition of the Analytical Writing Assessment score would noticeably increase the number of women who would be offered admission, but would have no impact on the number of minority applicants (Bridgeman & McHale, 1996). Adopting performance assessments also introduces a series of practical and psychometric issues that have not been resolved. These include the time and resources needed to evaluate a tremendous volume of potential test takers (the College Board alone currently administers more than two million SATs per year). They also include issues of test score generalizability because in most situations, performance assessment is based on a very small sample of test taker performance (Linn, 1994).

Another alternative to current admission testing practice is to incorporate noncognitive measures into the assessment package. Much promising work in this area has been reported in the literature. Tracey and Sedlacek (1984) measured eight noncognitive variables using the *Noncognitive Questionnaire* (NCQ). The NCQ includes the following variables: positive self concept or confidence; realistic self-appraisal, especially academic; an understanding of racism and an ability to deal with it; preference for long-term over short term goals; availability of a strong support person to whom to turn in crisis; successful leadership experience; demonstrated community service; and knowledge acquired in a non-traditional field. Tracey and Sedlacek (1984) have demonstrated the reliability, construct validity and predictive validity of this instrument. Specifically, they showed that the correlation between scores on the NCQ and college grades was approximately the same as the correlation between SAT scores and college grades for both black and white students. In addition, the multiple correlation of both the SAT and NCQ with college grades exceeded the correlation of either predictor alone. Their data also showed that the NCQ significantly predicted persistence for blacks, but not for whites. The significant relationships between the NCQ and academic performance has been replicated with other samples of black students (see for example, Rogers, 1984; Tracey & Sedlacek, 1985, 1987a, 1987b) as well as with a sample of specially admitted students (White & Sedlacek, 1986). The significant role of noncognitive factors has also been shown using instruments other than the NCQ (see for example, Pickering et al, 1992.) However, the results have not always been consistent. Some researchers failed to replicate the findings of Sedlacek and his colleagues with different samples of black undergraduates (Arbona and Novy, 1990; Hood, 1992). Fuertes and Sedlacek (1995) found that only one of the noncognitive measures—an understanding of racism and an ability to deal with it—was a significant predictor of academic performance for

Hispanic undergraduates and none were predictive of Hispanic student retention over a nine-semester period. And, Williams & Leonard (1988) found cognitive measures to be more important than noncognitive indicators for black undergraduates in technical programs (e.g., computer science and engineering.) The importance of the potential role of noncognitive factors in identifying academic success of students independent of traditional cognitive assessments, coupled with the unresolved inconsistencies in previous research, make this an area in need of continued investigation and refinement.

Recent advances in technology may hold the most promise for spawning assessment alternatives that will better serve the admission goals of colleges and universities both to assure academic standards and to provide equal access and opportunity. Several major testing programs, including the GRE, the GMAT, and Teacher Testing Programs, already have successfully implemented national computer administered testing programs. The benefit from computerized testing is not in the change from paper and pencil to computer administration per se, but rather in the potential for new definitions of what is tested and how test scores and ancillary information about applicants are reported. For example, the power of computer administered tests have the potential to help move assessment instruments away from multiple choice item formats without the loss of processing speed and reliability in scoring that were problematic in the early days of essay type admission tests. Testing programs already have made some progress in designing computer scored open-ended items to replace traditional multiple-choice item types. There are several documented examples. Plumer (1997) illustrated non-multiple choice item types that are under development for the LSAT. Bennett (1994) described an electronic infrastructure under development at ETS that would allow future tests to measure constructs not currently measured and not redundant with those that are currently measured. One example would be a measure of how effectively potential students might profit from instruction. “The general method for measuring this construct, known as ‘dynamic assessment,’ involves presenting the student with a task just above that individual’s level, providing hints or other instruction and retesting performance” (p. 11). Another example provided by Bennett was a measure of the ability to generate explanations. Powers and Enright (1987) demonstrated the value of this skill for graduate students, but routine assessment of the skill was prohibitively expensive at that time. Bennett suggested that technology under development could make the scoring cost effective.

Much work remains to be done in this area, particularly with respect to evaluating differential performance on the revised item formats among members of different ethnic groups. The related research on performance assessment, referenced earlier, raises a caution that test development efforts focussed simply on changing the question format in a computer administered testing mode may do little or nothing to change the performance gap between white and nonwhite test takers.

One of the benefits of computer adaptive test (CAT) methodology is the opportunity to somewhat reduce the number of items administered to a test taker without loss of accuracy of measurement. One potential gain to be realized from this reduction is to retain the base testing time but use that time to offer multiple formats to assess the same constructs, allowing test takers multiple opportunities to demonstrate their abilities. A second is to assess an increased number of factors for each test taker within the same amount of testing time. The latter could allow the assessment process to move away from the single admission test score toward a comprehensive assessment system. Such a system could assess a variety of cognitive and noncognitive constructs, could be formative as well as summative, and could present a profile of each applicant across a variety of dimensions that were important to an admitting institution.

Such a system could provide a viable alternative to the impossible task of attempting to develop a single test that could fairly assess the academic potential of students from a broad range of cultures, backgrounds, and talents. It also could help meet the concerns of public institutions required to treat all applicants similarly as well as help meet the needs of all institutions to clearly define in advance the criteria that they would consider in the selection process.

Summary and Highlights

A primary objective of this chapter was to identify the issues that must be evaluated when the utility and consequences of using test scores in the admission process are considered from the perspectives of academic standards, equity, and access. Related objectives were to bring to one place the research evidence that supports or refutes beliefs about standardized testing and equal access, and to identify gaps in the existing research.

A history of the development of standardized testing and its use in a higher education system with changing demographics and changing societal expectations provided the backdrop against which to examine technical questions about standardized testing. A review of past and on-going litigation stemming from issues related to equal access and use of test scores provided insight both to how tests can be used in making admission decisions and how litigation has helped frame public perception of the issues.

The majority of the questions that are asked about the use of standardized tests in the admission process fall under the general category of 'validity'. The core question is:

- Do test scores add any useful information to the admission process?

But it takes on many forms such as

- Do test scores predict future academic performance?
- Do they predict academic performance beyond the first year?
- Do they predict any outcomes other than GPAs?
- Are they biased?
- Do they predict differently for non-majority than for majority test takers?
- Does differential prediction deny opportunity to some groups of test takers?
- Can students "in-the-know" beat the test by learning a set of tricks?
- Does expensive short-term coaching raise test scores, thus undermining the validity of the test and increasing the score gap between rich and poor?
- What are the social consequences of heavy reliance on test scores in making admission decisions? Do those consequences derive from sources of test score invalidity?

A substantial body of research has been conducted by social scientists to address these questions. That research was cited and summarized in this chapter. Overall, the research provided strong evidence in support of the validity of standardized admission tests as one factor in the admission process. The research also found that the commonly used standardized admission tests are valid for members of different racial/ethnic groups, refuting the often expressed concern that test scores are valid only for middle-class white applicants. Despite the impressive amount of research designed to address questions like those posed above, additional work is required. Some of the existing research is dated and needs to be repeated using current test forms and current test taking populations; some needs to be extended to other testing

programs and/or test taker populations; and some new or still unanswered questions need to be addressed. A variety of research issues needing additional work are presented in discussions throughout the chapter and are extracted here. They include the following observations and recommendations.

- Much of the differential validity research is dated and needs to be replicated or updated.
- Test bias research that examines the predictive accuracy of the test for different groups typically is based on the assumption that the outcome variable (e.g., FYA) is not biased. Research to test the accuracy of that assumption is lacking.
- Many studies found that test scores over-predicted academic performance for some ethnic groups. There is a dearth of research focussed on explaining that finding.
- Many questions about the social consequences of heavy reliance on test scores in the admission process are not well researched. New work needs to distinguish between issues of distributive justice and sources of invalidity in order to guide potential remedies.

The discussion of appropriate test use distinguishes between statistical evidence of predictive validity and practical evidence of utility. Research highlighting the small differences in outcomes such as class rank or GPA that are associated with differences in test scores, as well as research demonstrating academic and professional success among applicants with the lowest test scores are presented within the context of the discussion of test utility.

A review of the available evidence about test score use leads to the conclusion that test scores can make important contributions to fair and equitable admission practice when used as one of several factors in making decisions. This is especially true when they are used as a tool to help interpret other academic indices such as prior grades. However, the summary of the debate on using test scores to define merit shows how misuse or over-use of test scores can be a disservice both to standardized testing and to higher education. Empirical research that would help define merit beyond the confines of test scores and grades is lacking and greatly needed.

Finally, possible alternatives for the future of admission testing were explored along a continuum ranging from eliminating the use of tests altogether to expanding the role of testing by expanding both the constructs measured and the form and format through which the measurement is accomplished. Technological advances are paving the way for the latter. Significant research is in progress, but much work needs to be done before the potential benefits might be realized.

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Chapter 5

The Educational Benefits of Diversity: Evidence from Multiple Sectors

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Above all, merit must be defined in light of what educational institutions are trying to accomplish. In our view, race is relevant in determining which candidates “merit” admission because taking account of race helps institutions achieve three objectives central to their mission—identifying individuals with high potential, permitting students to benefit educationally from diversity on campus, and addressing long-term societal needs (Bowen and Bok, 1998, p. 278).

The mission of an institution of higher education tells us what a college or university is about, what it values, what it holds to be true. Educational policies, programs, and practices emerge from the mission of the institution (Kuh, Schuh, Whitt, and Associates, 1991). Few would disagree with the assertion that higher education institutions have a unique responsibility to develop in students the knowledge, skills, and competencies that they need to be active members of society. In an increasingly diverse country that is inextricably connected to a larger “global” community, we must reconsider what it now means to be an active and productive member of society. As colleges and universities have recognized and responded to these trends, their mission statements have undergone a process of rather dramatic transformation. Increasingly, institutional mission statements at colleges and universities across the country affirm the role that diversity has in enhancing teaching and learning in higher education (Alger, 1997).

Administrators (e.g., see Bollinger, 1997; Rudenstine, 1997; Shapiro, 1995), academics (e.g., see Astone and Nuñez-Womack, 1990; Duster, 1993; Hurtado, Milem, Clayton-Pedersen, and Allen, 1998; Smith and Associates, 1997; Tierney, 1993), and national educational associations offer compelling arguments about the ways in which diversity expands and enriches the educational enterprise through the benefits that it

provides to individual students, to colleges and universities, and to our society and our world. In a statement endorsed by the presidents of sixty-two research universities (including eight Ivy League institutions and more than thirty public research universities), the American Association of Universities argued:

We speak first and foremost as educators. We believe that our students benefit significantly from education that takes place within a diverse setting. In the course of their university education, our students encounter and learn from others who have backgrounds and characteristics very different from their own. As we seek to prepare students for life in the twenty-first century, the educational value of such encounters will become more important, not less, than in the past.

A very substantial portion of our curriculum is enhanced by the discourse made possible by the heterogeneous backgrounds of our students. Equally, a significant part of education in our institutions takes place outside the classroom, in extracurricular activities where students learn how to work together, as well as to compete; how to exercise leadership, as well as to build consensus. If our institutional capacity to bring together a genuinely diverse group of students is removed—or severely reduced—then the quality and texture of the education we provide will be significantly diminished (Association of American Universities, “On the Importance of Diversity in University Admissions,” *The New York Times*, April 24, 1997, p. A27).

Yet, as the momentum for diversity reaches unprecedented levels on campuses across the country, institutional leaders find that they must respond to attacks that are levied against something that has been identified as being a central part of the educational missions of their campuses. Moreover, it is becoming apparent that decisions about campus diversity for many campuses will be made in courtrooms rather than in classrooms or boardrooms. This is not to say that the higher education community can or should have no role in influencing these decisions. Legal challenges to the use of race in college admissions require that attorneys, policy makers, scholars, and institutional leaders across the country search for empirical evidence that documents the benefits of diversity and provides evidence of persistent discrimination and inequality in higher education. This is not an easy task. When members of these diverse communities come together to discuss strategies for addressing these issues, they quickly learn that they probably do not speak the same language when it comes to diversity. What is compelling evidence in support of diversity in the eyes of a social scientist, or a college president, or a dean of students, may not meet the standards of evidence that are applied by an attorney or a supreme court justice.

Goodwin Liu (1998) offers a persuasive argument for “why, as a *legal doctrine*, educational diversity should qualify as a ‘compelling interest’” (p. 383). This manuscript thoughtfully argues for “placing the diversity rationale squarely within the existing norm of equal protection doctrine. In other words, it is an effort to legitimize an educational policy in the language of constitutional law” (p. 383). Liu does this by illustrating how the remedial and diversity rationales for affirmative action do not differ substantively in any ways that would make either more constitutionally “compelling.” However, a key provision in defending the diversity rationale in court cases which challenge it involves the ability of an institution to provide a “strong basis in evidence” to support the assertions that are made regarding an institution’s interest in educational diversity.

As a starting point, it seems reasonable to require a university invoking the diversity rationale to define and substantiate the educational needs that its admissions policies purport to meet. To meet this requirement, a university could not simply offer broad assertions about the need to improve racial understanding; it would have to articulate why a racially diverse student body is vital to the specific school, department, or educational program in which affirmative action is used (Liu, 1998, p. 431).

The value of diversity in higher education is also being questioned in the court of public opinion. While the public generally lends its support to democratic ideals of fairness, equity, and equality of opportunity, the debate over affirmative action is constructed in a way in which vocal portions of the public argue that affirmative action violates the very principles that led to its creation. Chapter 3 of this volume (by Shana Levin) provides us with valuable insights into why this may occur. The approval of ballot initiatives in California and Washington, and, efforts to bring similar initiatives to the ballots in other states, indicate that many in our population do not understand the value of diversity in colleges and universities nor do they understand the ways in which diversity enriches our individual and collective experiences.

As perhaps at no other time in our history, scholars from a variety of disciplinary backgrounds have the opportunity to demonstrate the ways in which their research findings provide evidence of the educational outcomes of diverse institutional environments. As this body of research evidence continues to build, it will help to insure that the benefits of diversity are located at the center of the educational enterprise. This chapter illustrates how scholarship that documents the value of diversity in institutions of higher education, from a variety of disciplines and perspectives, can be used to inform and enhance the argument for diversity on campus. Classic and contemporary research are used to inform the debates surrounding affirmative action and other policies that are designed to create and maintain diverse learning environments.

In developing this chapter, I have conducted a multidisciplinary analysis of the research literature, and examined studies that help to increase our understanding of the benefits of diverse colleges and universities. The discussion in this chapter regarding the benefits of diversity uses a three dimensional framework that considers the ways in which diversity benefits: (1) individuals, (2) institutions, and (3) our society. *Individual benefits* refer to the ways in which the educational experiences and outcomes of individual students are enhanced by the presence of diversity on campus. *Institutional benefits* refer to the ways in which diversity enhances the effectiveness of an organization or institution. *Societal benefits* are defined as the ways in which diversity in colleges and universities impact quality of life issues in the larger society. Examples of these include the achievement of democratic ideals, the development of an educated and involved citizenry, and the ways in which groups who are underserved in society are able to receive the services that they require.

This chapter has drawn from research and writing in the areas of critical race theory, economics, education, feminist studies, health policy, law, medicine, organizational behavior, organizational effectiveness, psychology, social psychology, and sociology. Table 1 provides a summary of the findings of this analysis within these three dimensions. It is hoped that this approach provides persuasive evidence regarding the ways in which diverse college environments benefit us all. Or, in the words of the legal community, this information is meant to demonstrate that diversity is a compelling

interest for institutions of higher education and for members of our increasingly heterogeneous society.

. . . the attack on affirmative action, coming as it does out of tremendous anxiety in a changing world, is an opening for a more progressive vision (Lawrence and Matsuda, 1997, p. 278).

Individual Benefits

A great deal of the research in higher education traditionally has examined the ways in which individual students grow and change while in college (see for example, Astin, 1977, 1993; Feldman and Newcomb, 1969; Pascarella and Terenzini, 1991). In recent years, more of this research has focused on the ways in which racial dynamics on campus influence student outcomes. The most abundant research evidence supporting arguments for the continued use of affirmative action in college admissions exists in the area of how *individuals* benefit from diversity. *Individual benefits* refer to the ways in which the educational experiences and outcomes of individual students are enhanced by the presence of diversity on campus. Research evidence regarding the individual benefits of diversity suggests that diversity enhances student growth and development in the cognitive, affective, and interpersonal domains.

This educational benefit is universal in that all students learn from it, not just minority students who might have received a “bump” in the admissions process. Indeed, majority students who have previously lacked significant direct exposure to minorities frequently have the most to gain from interaction with individuals of other races. The universality of this benefit distinguishes the diversity rationale from the rationale of remedying discrimination, under which minority students received special consideration to make up for past injustices to their racial group (Alger, 1997, p.).

Before discussing the evidence that documents the ways in which diversity benefits individuals, it is important to define what is meant by diversity. In the context of this discussion of individual benefits, there are two primary types of diversity. The first, structural diversity refers to the numerical and proportional representation of students from different racial/ethnic groups in the student body (Hurtado, Milem, Clayton-Pedersen, and Allen, 1998, 1999). A second type of diversity is characterized by the interactions that students have with difference. Within the category of diverse interactions, students are influenced by the interactions that they have with diverse ideas and information as well as by the interactions that they have with diverse people. These types of diversity are not mutually exclusive. In fact, students are most frequently exposed to diverse information and ideas through the interactions that they have with diverse people. The impact of each type of diversity is enhanced by the presence of the others (Gurin, 1999; Hurtado, Milem, Clayton-Pedersen, and Allen, 1998, 1999). Gurin (1999) argues that structural diversity is a necessary precursor for diverse interactions to occur. Diverse ideas and information have entered the academy largely due to the presence and efforts of diverse people (Gurin, 1999; Hurtado, 1997; Milem, 1997, 1999). Likewise, it is impossible to interact with diverse people if they are not represented in the environment (Gurin, 1999).

Outcomes of Diversity

In considering what the outcomes of diversity are for individuals, it is helpful to understand what is meant by outcomes. Patricia Gurin (1999) suggests a helpful method for describing diversity-related outcomes. Gurin proposes three major types of outcomes that are influenced by campus diversity.

Learning outcomes refer to active learning processes in which students become involved while in college, the engagement and motivation that students exhibit, the learning and refinement of intellectual and academic skills, and the value that students place on these skills after they leave college. *Democracy outcomes* refer to the ways in which higher education prepares students to become involved as active participants in a society that is becoming increasingly diverse and complex. Gurin (1999) suggests that three major categories—citizenship engagement, racial/cultural engagement, and compatibility of differences—characterize democracy outcomes. Citizenship engagement refers to students' interest and motivation in influencing society and the political structure, and, to students' participation in community and volunteer service. Racial/cultural engagement refers to students' levels of cultural awareness and appreciation and their commitment to participating in activities that help to promote racial understanding. Compatibility of differences refers to an understanding by students that there are common values across racial/ethnic groups, that group conflict can be constructive when it is used appropriately, and that differences do not have to be a divisive force in society. The last category of outcomes discussed by Gurin is related to *the ability of students to live and work effectively in a diverse society*. Specifically, this refers to the extent to which college has prepared students to be successful in their lives after college and the extent to which the college experience is successful in breaking a pattern of continuing segregation in society. To the categories of outcomes described by Gurin (1999), it is helpful to add two other types of outcomes. The first reflects the ways in which students perceive that diversity has enriched their college experiences. These can be labeled as *process outcomes*. Measures of student satisfaction, perceptions of campus climate, etc. are examples of outcomes that are included in this category. A final type of outcome reflects the *material benefits* that students accrue resulting from their attendance at diverse colleges. The most obvious example of material benefits would be higher wages.

The Research Findings

In his national longitudinal study of college impact, Alexander Astin (1993) found that an emphasis by faculty on diversity in courses had positive effects on increased racial understanding and overall satisfaction with college. Villalpono (1994) reports similar findings regarding the relationship between satisfaction and the extent to which faculty included racially/ethnically diverse materials in their courses. This finding held for White students as well as for students of color. Moreover, Tanaka (1996, cited in Smith and Associates, 1997) found that a more supportive campus climate had positive effects on sense of community, cultural awareness, commitment to promoting racial understanding, and overall satisfaction with the college experience. Similarly, Gilliard (1996) found that perceptions of a supportive campus climate were important to the success of Whites and students of color.

In studies of the impact of college on racial attitudes and views of White men and women, Milem (1992, 1994) found that students who had participated in more frequent discussions of social and political issues, who had talked more frequently about racial/ethnic issues, who had socialized with someone from another racial/ethnic group,

who had attended a racial awareness workshop, and/or who had enrolled in ethnic studies courses were more likely to report increased levels of racial and cultural awareness, greater commitment to the goal of promoting racial understanding, and more liberal racial attitudes. Pascarella, Whitt, Nora, Edison, Hagedorn, and Terenzini (1996) reported a positive relationship between racial and cultural awareness workshops and students' openness to cultural, racial, and value diversity. These workshops positively influenced students' views regarding the value of diversity on campus. Moreover, White students who attended these workshops were more likely to perceive the racial climate on their campus in ways that were more closely aligned with students of color on campus. In a related finding, the climate for diversity is likely to be improved by encouraging participation in these workshops (Springer, Palmer, Terenzini, Pascarella, and Nora, 1996). Finally, Pascarella et al (1996) report evidence that participation in racial and cultural awareness workshops led to measurable gains in critical thinking for students at the end of their first year of college.

In another study using this data set, Pascarella, Edison, Nora, Hagedorn, and Terenzini (1996) studied changes in students' openness to diversity and challenge after the first year of college. As expected, a student's level of initial openness to diversity and challenge was the strongest predictor of his/her subsequent openness to diversity. In addition, there were aspects of the college experience that predicted openness at the end of the first year. The extent to which students perceived that their college was nondiscriminatory, participated in racial and cultural awareness workshops, and interacted with diverse peers all predicted greater openness to diversity and challenge. On the other hand, participation in intercollegiate athletics, membership in fraternities or sororities, and enrolling in mathematics courses all led to decreases in openness to diversity (Pascarella, et al., 1996).

In an extension of this study, Whitt, Edison, Pascarella, Terenzini, and Nora (1998) examined factors that predicted openness to diversity and challenge after the second and third years of college. They found that precollege openness to diversity, sex (being female), age (being older), perceptions of a nondiscriminatory racial environment at the college, participation in racial or cultural awareness workshops, having diverse student acquaintances, and engaging in conversations with other students in which diverse ways of thinking and understanding were emphasized predicted openness to diversity and challenge after the second and third years of college. Only one variable served as a negative predictor of the outcome. As in the study of openness to diversity after the first year, this variable measured the number of mathematics courses students had taken. The authors also explored the extent to which conditional effects were found in this study of which two are worth noting. First, the net effects of college on openness to diversity differed for men and women and for white students and students of color. Specifically, patterns of involvement for men and women predicted openness to diversity and challenge differently. Higher levels of participation in clubs and organizations served as a positive predictor of openness to diversity for women, but were negative predictors for men. While perceptions of a nondiscriminatory campus racial environments were positive predictors of openness to diversity for both white students and students of color during the third year of college, the impact of these perceptions was stronger for students of color than for white students. These results reinforce findings from other studies regarding the important relationship between campus racial climate and student outcomes (e.g. see, Astin, 1993; Hurtado, 1990, 1992; 1994a, 1994b; Gilliard, 1996; Hurtado, Milem, Clayton-Pedersen, and Allen, 1998, 1999; Kuh, 1993; Smith, 1995; Smith and Associates, 1997).

Recent research done on the impact of a curriculum enhancement project in a sequence of human development courses adds to our understanding of the impact of exposure to diverse ideas and information. This study found that curricular and pedagogical interventions increase students' openness to diversity and their critical thinking skills (MacPhee, Kreutzer, and Fritz, 1994). This study evaluated the impact of efforts to "infuse multicultural content" into the courses of eight departments by a group of faculty in a College of Applied Human Sciences. "The purpose was to promote cultural pluralism and social equality by using instructional materials that are appropriate for diverse students and that are integrated rather than supplementary" (p. 705). Further, these efforts by the faculty were coordinated to modify a specific sequence of courses. Three rationales were provided regarding the importance of this sequencing of classes. First, the authors argue that this conveys to students that this information is essential to their understanding of human behavior. Second, repeated exposure to this information is likely to reinforce these important lessons. Third, by making these issues central to the curriculum of the profession, minority students are less likely to feel marginalized and stigmatized, which is likely to increase their identification with their profession.

Qualitative and quantitative research methods were employed in the study. The findings of the quantitative analyses suggested that student attitudes toward outgroups (particularly the poor) were broadly influenced by the transformation of the curriculum. They also found small, but statistically significant, changes in the racial attitudes of students. The qualitative analyses revealed three primary findings. First, students appear to have mastered a number of critical thinking skills. Second, levels of ethnocentrism among students declined. Finally, students were able to distinguish between poverty and ethnicity as developmental risk factors (MacPhee, Kreutzer, and Fritz, 1994).

Gurin (1999) provides additional evidence regarding the ways in which diversity enhances the learning outcomes of students. Students who reported higher levels of contact with diverse ideas and information and diverse people were more likely to show growth in their "active thinking processes" which were represented by increases in measures of complex thinking and social/historical thinking. In addition, students who had greater exposure to diversity were more likely to show higher levels of intellectual engagement and motivation. Students who had greater exposure to diversity were likely to report that they had higher post-graduate degree aspirations. The analyses also showed exposure to different types of diversity had different relative impact on students based upon their racial/ethnic background. While White students were more likely to benefit from exposure to diverse ideas and information *and* exposure to diverse peers, African American students were most likely to benefit from their interactions with diverse peers. Moreover, there was evidence that African Americans experienced positive learning outcomes when they were exposed to close friends of their own race. In other words, for African American students to fully benefit from diversity, they must have contact with diverse peers as well as interaction with same race peers.

Much attention has been given to the findings of a recent study by William Bowen and Derek Bok (1998) of Black and White students at institutions that employ selective admissions policies and what these findings tell us about the use of affirmative action in college admissions. There is a perception held by many opponents of affirmative action programs that students of color who are admitted under these programs are less qualified (or even unqualified) than other students. However, the analyses in this book provide persuasive evidence that should dispel this myth. The Black students in this study were highly qualified for admission and the success that they exhibited provides persuasive proof of this. Specifically, Black students who were likely to have been admitted through affirmative action in admissions at the sample of selective institutions in this study

exhibited high levels of success across a variety of outcomes. Moreover, the findings of this study provide evidence indicating that the students who attended these institutions were influenced positively by the campus diversity they encountered while in college (Bowen and Bok, 1998). Black students who attended these schools “had strong academic credentials when they entered college, . . . graduated in large numbers, and . . . have done very well after leaving college” (Bowen and Bok, 1998, p. 256). For undergraduates, nearly 75 percent of the Black students who entered the institutions in Bowen and Bok’s sample graduated from college after six years. Also, the more selective the institution, the higher the completion rate for Black students. These figures exceed by a wide margin the average graduation rates for NCAA Division I institutions for Blacks (40 percent) and for Whites (59 percent). Black students who attended selective institutions in the Bowen and Bok (1998) study graduated from law, business, and medical schools at a rate of about 90 percent.

Black students who attended selective institutions were five times as likely as all Black students nationwide to earn advanced degrees (professional degrees or Ph.D.s) were. Black men in the entering cohort of 1976 reported average annual incomes of \$82,000. This represents twice the earnings of Black college graduates from across the nation. Black women graduates of these institutions earned an average of \$58,500 which is 80 percent more than all Black women graduates (Bowen and Bok, 1998). However, earnings for Black men and women graduates were less than their white peers who graduated from this group of selective colleges. The findings of multivariate analyses conducted for the study revealed that Black men were likely to earn less than their white colleagues were after controlling for the effects of grades, college majors, and socioeconomic status. While Black men and women who attended selective institutions earned more than Blacks who graduated from other institutions, the findings from the Bowen and Bok study replicate findings from other studies that indicate a persistent and troublesome earnings gap between Black and white college graduates.

In another study related to the material benefits of attending diverse “high quality” institutions, Daniel, Black, and Smith (1997) examined the relationship between college quality and the wages of young men. Not surprisingly, the authors found that attending a higher quality college increased the wages of young men who attend them. Moreover, these “returns” were significantly higher for Black men than White men. However, there was a finding from the study that some might find somewhat surprising. The results of the study indicated that attending colleges with relatively diverse student bodies increased the earnings of Black and White men who attended them (though the returns were somewhat higher for White men).

Many have argued that the status of campus race relations are poor citing low rates of social interaction and claims that segregation of various racial/ethnic groups is increasing on college campuses (Altbach and Lomotey, 1991; Bunzel, 1992). However, a growing body of research suggests a different picture of racial dynamics on campus. Black and white students in the Bowen and Bok (1998) study reported that they highly valued the racial diversity of their college or university. Nearly half of white respondents (46 percent) and almost 60 percent of Black respondents in the 1976 cohort indicated that their college had helped extensively in developing their ability to get along with people of different races and cultures. These proportions increased substantially among members of the 1989 cohort (63 percent of whites and 70 percent of Blacks).

Other studies provide a richer and more illuminating picture of the status of cross-race interaction on campus. Researchers found that while White students interpreted ethnic group clustering as racial segregation, minority students viewed this behavior as a means of cultural support within a larger unsupportive environment (Loo and Rolison,

1986). While Chicano, Asian American, and African American students reported widespread and frequent interaction across race/ethnicity in various informal situations (i.e., dining, roommates, dating, socializing), White students were least likely to report engaging in any of these activities across race (Hurtado, Dey, and Treviño, 1994). Bowen and Bok (1998) indicated that nearly six out of ten Whites in their sample of students reported that they “knew well” at least two Black students while about one quarter reported that they “knew well” at least two Latino students. Similar to the findings of Hurtado, Treviño, and Dey (1994), Black students in the Bowen and Bok (1998) study were much more likely to report that they had friends from other racial/ethnic groups. Nearly 90 percent indicated that they knew well at least two White students and 54 percent reported that knew well at least two Latino students.

The benefits of cross-race interaction are readily apparent. The extent to which students interacted cross-racially was influential in determining the amount of acceptance students reported for people from other cultures, the rate at which they participated in community service programs, and the amount of growth they exhibited in other areas of civic responsibility (Bowen and Bok, 1998). In similar findings, involvement in more racially diverse environments and activities led to higher levels of cultural awareness and acceptance and increased commitment to the goal of improving racial understanding (Milem, 1992, 1994; Sax and Astin, 1997). Conversely, the absence of interracial contact clearly influences students’ views toward others, support for campus initiatives, and educational outcomes. White students who had the least social interaction with someone of a different background were less likely to hold positive attitudes toward multiculturalism on campus (Globetti, Globetti, Brown, and Smith, 1993).

Another study revealed that socializing across race and discussing racial/ethnic issues have a positive effect on students’ retention, overall satisfaction with college, intellectual self-concept, and social self-concept (Chang, 1996). Chang (1996) found that maximizing cross-racial interaction and encouraging on-going discussions about race are educational practices that are beneficial to students. However, when the effects of increased structural diversity for students of color are considered without involvement in these activities, students of color were likely to report less overall satisfaction with their college experience (Chang, 1996). Thus, increasing *only* the structural diversity of an institution without considering the influence that these changes will have on other dimensions of the campus racial climate is likely to produce problems for students at these institutions. Moreover, Chang’s study shows that the larger the representation of racially diverse students at an institution, the greater the likelihood that students will be engaged in these experiences. In an extension of this research, Chang (1997) found that structural diversity (as represented by the enrollment of students of color at an institution) was an essential ingredient in providing opportunities for this interaction to occur. In short, as an institution becomes more structurally diverse, the greater the likelihood that students will have opportunities to socialize across racial groups and to discuss racial issues. As this likelihood increases, the campus environment is likely to become more supportive of diversity-related practices.

Gurin’s (1999) work builds on these findings. In her analyses of a national longitudinal data set, Gurin found that higher levels of structural diversity increased the likelihood that students would have the opportunity to be exposed to diverse people and diverse ideas and information. Specifically, students who attended more structurally diverse institutions were more likely to enroll in ethnic studies courses, attend racial/cultural awareness workshops, discuss racial/ethnic issues, socialize across race, and have close friends in college from other racial backgrounds.

Many of the studies cited in this section support the important role that peers have in influencing student learning. The idea of peer and/or reference group effects is a theoretical cornerstone of many of the studies of college impact beginning with Newcomb in 1943 and continuing in to the late 1960s (Milem, 1994, 1998). In recent years, we have seen renewed interest in assessing the effects of peers on a variety of student outcomes (e.g., see Astin, 1993; Chang, 1996; Dey, 1988, 1991, 1996, 1997; Milem, 1994; 1998; Weidman, 1979; Whitt, et al, 1998). The findings summarized above point to the important role that peer groups, and specifically, a diverse group of peers, plays in shaping positive learning outcomes for students. Clearly, the findings of this research suggest that any actions taken to reduce the numbers of students of color on college and university campuses will have a powerfully negative effect on the opportunity that students have to learn from one another.

. . . as educators, we are compelled to understand that students’ hearts and minds may be impacted most by what they learn from peers. This is precisely why the diversity of the student body is essential to fulfilling higher education’s mission to enhance learning and encourage democratic outcomes and values (Gurin, 1999, p. 147).

Research on School Desegregation

The findings of many desegregation studies indicate that minority segregation that occurs in educational settings tends to be perpetuated over stages of the life cycle and across institutional settings (Braddock, 1985). Braddock, Crain, and McPartland (1984) assert that “school desegregation is leading to desegregation in several areas of adult life” (p. 261) including college, social situations, and in jobs. Their analyses indicate that desegregation changes the attitudes and behaviors of Whites and Blacks. This can be found in attitudes that reveal diminishing racial stereotypes and lessened fears of hostile reactions in interracial settings among White adults who were in desegregated settings as children.

Braddock (1985) points out that “one of the most important aspects of racial segregation is its tendency to perpetuate itself” (p. 11). Compelling research evidence shows that this pattern holds true for majority and minority individuals. The results of changing desegregation patterns are becoming more evident, with resulting patterns of behaviors and interactions that have implications for college and work environments. For example, there is research evidence that suggests that segregation in elementary and secondary schools is perpetuated in college. Braddock (1980) and Braddock and McPartland (1982) found black students who had attended desegregated elementary-secondary schools were also more likely to attend desegregated colleges. Evidence indicates that early school desegregation and community desegregation patterns tend to promote adult desegregation in work environments (Braddock & McPartland, 1989). This was especially true for Northern Blacks where the relationship between school and community desegregation was less confounded. Braddock, McPartland, and Trent (1984) found that Blacks and Whites who attended desegregated schools were more likely to work in desegregated firms than were their peers who attended segregated schools. In an extension of this earlier work, Braddock, Dawkins, and Trent (1994) found that Whites who had attended desegregated schools were more likely to work in environments with Black or Latino coworkers. Moreover, Black and Latino students who attended desegregated schools were more likely to work in environments where they had White coworkers.

In related findings, Braddock and Dawkins (1981) found that Blacks who had attended desegregated high schools were more likely to receive better grades in college than were Blacks who attended segregated high schools. Similar findings in another study show a greater likelihood of persistence in college among those Blacks who attended desegregated high schools (Green, 1982). Despite these findings regarding the positive impact of desegregation, it is important to note that segregation at the high school level in communities in this country is increasing (Orfield, 1996). This suggests that college may be the first (and only) chance that many students have to encounter and interact with someone from a different race or ethnicity (Hurtado, Milem, Clayton-Pedersen, and Allen, 1998, 1999). Recent research findings indicate that high levels of engagement with diversity in college lead to engagement with diversity after college.

Diversity experiences during college had impressive effects on the extent to which graduates in the national study were living racially and ethnically integrated lives in the post-college world. Students who had taken the most diversity courses and interacted the most with diverse peers during college had the most cross-racial interactions five years after leaving college. This confirms that the long-term pattern of segregation noted by many social scientists can be broken by diversity experiences during college (Gurin, 1999, p. 133).

Summary

A review of the research regarding the individual benefits of diversity suggests that there is an important relationship between an emphasis on diversity and important student outcomes. Simply put, there are numerous ways in which individuals benefit from their interactions with diverse information and ideas and diverse people while they are in college. Research indicates that cross-race interaction has positive impacts on a range of important outcomes and that the greater the structural diversity of an institution, the more likely that students are to engage in these types of interaction. The importance of developing increased openness to diversity is intimately connected to aspects of the institutional and societal outcomes of diversity that are discussed later in this chapter. This openness is central to the development of crosscultural competence and is also an essential element of what it means to be an educated citizen in a multicultural society. Student views of the campus racial climate influence other outcomes of significance. The importance of climate issues will be further addressed later in this chapter.

In summarizing the individual benefits of diversity, it may be helpful to consider how these benefits fit within the five major categories of outcomes discussed at the beginning of this section. Clearly the research evidence indicates that greater exposure to diversity leads to growth in democracy outcomes. Students who have been exposed to greater diversity are more likely to show increases in racial understanding, cultural awareness and appreciation, engagement with social and political issues, and openness to diversity and challenge. They are more likely to exhibit decreases in racial stereotyping and levels of ethnocentrism. Students who interacted more with diversity in college exhibited more liberal racial attitudes four and nine years after entering college. Moreover, greater engagement with diversity while in college leads to growth in civic responsibility. This can be seen in increased commitment to the goal of helping to promote racial understanding, greater involvement in community and volunteer service, and higher levels of involvement in community action programs.

There are also a number of ways in which the learning outcomes of students are enhanced by their interaction with diversity in college. Students who engaged in more

interactions with diversity while in college show greater relative gains in critical thinking and active thinking. They are also more likely to show evidence of greater intellectual engagement and academic motivation. Students who interact more with diversity while in college show greater relative gains in intellectual self-concept and social self-concept. Finally, higher levels of interaction with diversity in college predict higher levels of retention and increases in the degree aspirations of students. African American students who interact more with diversity while in college are more likely to pursue and obtain a graduate or professional degree after completing their bachelor's degree.

The research evidence indicates that interacting with diversity while in college breaks the cycle of perpetuation of segregation that is widely prevalent in our society. Students who attend institutions with higher levels of diversity and report high levels of interaction with diverse people and diverse information are more likely to live and work in desegregated environments after leaving college. Interacting with diverse ideas and diverse people while in college encourages students to continue these behaviors after leaving college. Gurin's (1999) findings suggest that this pattern is particularly strong for Whites. This finding has added significance when we consider that college is likely to be the first time that students will have the opportunity to be educated and to live in a racially diverse setting.

The research findings also suggest that process outcomes, or outcomes related to the overall college experience of students, are enhanced by campus diversity. Students who interacted with diverse people and diverse ideas while in college reported higher levels of satisfaction with their collegiate experience. Moreover, students who interacted with diversity while in college were likely to report a greater sense of community while in college. Greater interaction with diverse people and ideas also served to decrease the gap in views of the campus climate frequently found between students of color and White students. This suggests that greater interaction with diversity in college helps students to develop the ability to understand and appreciate the perspective of groups other than their own.

An emerging body of research suggests that students who attend more diverse colleges are likely to enjoy greater material benefits than are their peers who attend less diverse institutions. This is particularly true for students who attend highly selective institutions. Research findings from the Bowen and Bok (1998) study indicate that African American men and women who attended selective institutions are likely to make much more money than their peers who attended less selective institutions are. In a study of the impact of college "quality" on men's wages, the findings indicate that White and Black men who attended more racially diverse institutions were likely to earn more money than their peers who attended less diverse "high quality" institutions. Based upon the many findings summarized in this section, it is clear that diversity benefits individuals in a variety of important ways.

Institutional Benefits

In the previous section of this chapter, the ways in which individuals benefit from their experience with diversity were discussed. The research evidence also indicates that institutions or organizations may also benefit by greater diversity within the institution or organization. The institutional benefits of diversity refer to the ways in which diversity enhances the effectiveness of an organization or institution. Regrettably, there has not been much empirical analysis about the ways in which colleges and universities are

influenced by the diversity that exists on campuses. However, there is an emerging body of research that provides some evidence about how diversity affects colleges and universities. Moreover, research done in the private sector provides rather compelling evidence about the ways in which diversity enhances organizational effectiveness.

The leadership provided by the private sector in studying these questions is certainly no accident. Businesses realize that if they are to be competitive both “globally” and at home, they must find ways to address the challenges and maximize the opportunities that increased levels of racial, ethnic, and cultural diversity present them. This section begins with a discussion of findings from a study of the impact of increased globalism on the human resource needs of organizations. This is followed by a discussion of research that has been done regarding the impact of diversity in organizational settings. Finally, this section concludes with a discussion of emerging research that provides some evidence about the ways in which faculty diversity affects institutions of higher education.

Preparing Workers for a Global Economy

A recent report by the RAND Corporation (Bikson and Law, 1994) provides important information regarding the human resource needs that are a result of a rapidly developing global economy. Officials from sixteen multinational corporations and sixteen higher education institutions from cities in four geographic regions (Los Angeles, New York, Chicago, and Houston/Dallas areas) were interviewed in this study. These sites were chosen because of evidence indicating that “they appeared to be aware of and actively responding to an increasingly global economic environment and are thus likely to be on the cutting edge regarding issues of globalism” (p. vii).

The study addressed four primary areas: the ways in which globalism was understood by these corporations and colleges; the human resource needs presented by these views of globalism; the things that colleges and corporations do (or can do) to prepare workers who meet these human resource needs; and the things that still must be done to produce a workforce that is competitive in a global economy.

The corporate and academic communities were in general agreement regarding their views of globalism. First, they believe that economic activity has moved from a “local” domain to an international or “global” domain. Moreover, in order to be effective, this economic activity must be highly adaptive to local conditions. These changes have created a need “for fast, flexible responses to opportunities and challenges” which press for operational changes in organizations. Finally, in order for all of this to occur, employees must be trained to perform effectively to meet these challenges and the demands that they generate (Bikson and Law, 1994).

Bikson and Law (1994) reported that the academic and corporate communities shared consensus about how this movement toward globalism impacts the human resource needs of corporations that want to remain competitive in the global economy. The authors suggested four types of human resource needs that result from their research. *Domain knowledge* includes knowledge in specific subject matter areas. The study’s findings suggested that colleges currently produce graduates with strong domain knowledge. However, citing concerns about the preparation of students in K-12 education, some respondents raised concerns about whether colleges and universities will be able to continue to do this. *Cognitive, social, and personal skills* are not being developed well in students in the opinion of the corporate leaders who were interviewed. Cognitive skills include decision-making, problem solving, and learning how to learn. Social skills include an ability to function effectively in workgroups with others of diverse backgrounds. Personal skills include flexibility and adaptability, openness to new

ideas and approaches, empathy regarding the perspectives that others may hold commitment to high quality work, and innovativeness. *Prior work experience and on-the-job-training* involve the opportunity for students to apply their domain knowledge and social and personal skills in work settings while in college. *Crosscultural competence* was identified as the most critical human resource need created by globalism. This type of competence crosses the other three categories. “It involves some domain knowledge (in relation to other cultures) as well as social skills and personal traits that enhance crosscultural communication and cooperation” (Bikson and Law, 1994, p. x).

The need for organizations to have a workforce that has crosscultural competence is most salient to the issues and themes discussed in this chapter. The authors suggest that crosscultural competence has an attitudinal and a cognitive dimension to it.

Crosscultural competence, then, chiefly entails a widened knowledge base plus openness and adaptability to different cultural perspectives—and the willingness to learn whatever else is needed to deploy domain skills effectively in new contexts (including, perhaps, functionality in another language). Although these sound like the sorts of prerequisites universities are well-suited to fulfill, they are what corporations find in shortest supply among entry-level candidates” (Bikson and Law, 1994, p. 26).

The findings of this study indicate that many students do not get enough exposure to other cultures to learn how to work effectively with individuals who are different than they are. These differences manifest themselves in the norms, beliefs, values, and assumptions that students hold (Bikson and Law, 1994). Colleges must find ways for students to communicate regularly across communities of difference so that they are able to develop fully the crosscultural competencies identified by corporate representatives as being essential to the global competitiveness of their organizations.

Bikson and Law (1994) assert that crosscultural competence is a skill that is also essential to working successfully with a diverse domestic workforce. “The need to understand and interact with individuals from different backgrounds is location-independent. Moreover, a number of companies have moved to make diverse work groups a part of the way they do business everywhere” (p. 25). The authors argue that unless colleges do a better job of developing these skills and competencies in native students, corporations are likely to look increasingly at international students educated in US institutions to meet their human resource needs (Bikson and Law, 1994). These students benefit from the excellent domain knowledge that is presented in colleges in the United States while also demonstrating levels of crosscultural competence by functioning successfully as bicultural people during their studies in the United States. Moreover, these students are bilingual (and frequently multilingual).

Finally, Bikson and Law (1994) argue that if colleges are to meet the challenges that are presented by an increasingly global economy, they will have to make changes in many areas including the curriculum, extracurricular activities, enhanced faculty development, and innovative cooperative ventures with other colleges and universities around the world as well as with private industry (Bikson and Law, 1994). The authors make specific recommendations about opportunities that currently exist that can help in meeting these needs.

Colleges should make better use of the cultural diversity already available in their student bodies and localities to cultivate global awareness and crosscultural competence . . . Colleges should provide faculty with incentives (and, if possible, with resources) to develop new courses or adapt existing

courses to address globalism. Faculty currently receive strong signals that the only relevant performance criteria are publication records and teaching evaluations (p. xiv).

The authors suggest that students “should use the cultural diversity of their own campuses and localities to develop crosscultural competence” (Bikson and Law, 1994, p. xv). Clearly, if used properly, diverse colleges and universities provide an environment for learning that can be helpful in providing students with the critical skills and competencies that are required in an economy-both domestic and global-that needs workers who can demonstrate that they have cross cultural competence.

Learning from Research on Diversity in Organizations

In a review of the impact of cultural diversity in organizational settings, Taylor Cox (1993) suggested that three types of organizational goals are achieved by managing diversity effectively. These include goals pertaining to moral, ethical, and social responsibility, legal obligations of organizations, and economic performance goals. Cox (1993) cited research evidence indicating that a relationship exists between the affective and achievement outcomes of individuals and dimensions of diversity (gender, race, and age). Specific outcomes cited include job involvement levels, employee turnover, promotability ratings, and levels of value congruence. Cox asserted that properly managing diversity leads to lower turnover rates, greater use of flextime work scheduling, and greater work team productivity. Organizations that properly capitalize on their diversity should enjoy a competitive cost advantage (Cox, 1993; Reskin, 1998).

Five factors emerge as indicators that diversity enhances organizational performance. These include: (1) attracting and retaining the best available human talent, (2) enhanced marketing efforts, (3) higher creativity and innovation, (4) better problem solving, and (5) more organizational flexibility (Cox, 1993; Cox and Blake, 1991).

Women and non-white men continue to increase in proportional representation in the available work force across the United States (Judy and D’Amico, 1997), Europe, and the world (Cox, 1993). In the United States, whites’ representation in the workforce will decrease from 76 percent in 1995 to about 68 percent in 2020. While Asian Americans show the greatest proportional growth in the population, Latinos show the largest growth in absolute numbers and will account for 36 percent of the total population increase between 1990 and 2020 (Judy and D’Amico, 1997). Moreover, these changes will be felt more dramatically in particular regions of the country. For example, in California, 42 percent of the population will be Latino, 18 percent Asian, and 33 percent white (Judy and D’Amico, 1997). Hence, for continued organizational success and viability, organizations must be successful in hiring and retaining workers from diverse groups.

At the same time that the workforce is becoming much more diverse, so are consumer markets. At present, people of color represent more than \$500 billion in consumer spending in the United States (Cox, 1993). Research indicates that sociocultural identity affects buying behavior. Having a diverse organization facilitates selling goods and services in an increasingly diverse marketplace. There is great public relations value in being identified as an organization that manages diversity well. A diverse workforce can help organizations to identify the ways in which culture affects the buying decisions of consumers. Research indicates that people from minority groups are more likely to do business with representatives of their own cultural group (Cox, 1993).

Research evidence supports the idea that diverse work teams promote creativity and innovation (Cox, 1993; Reskin, 1998). Organizational diversity has been shown to enhance productivity by better utilizing workers’ skills (Reskin, 1998). Kanter’s (1983) study of innovation in organizations found that the most innovative companies

deliberately establish heterogeneous work teams. In this study, Kanter noted that more innovative organizations were more likely to have done a better job of combating racism, sexism, and classism in the organization. They also were more likely to employ women and non-White men.

Nemeth's work (1986, cited in Cox, 1993) indicates that minority viewpoints can stimulate consideration of previously unconsidered alternatives in work groups. In a related study, after holding constant ability levels, heterogeneous work groups were judged to be more creative than groups that were more homogeneous (Triandis, Hall, and Ewen, 1965 cited in Cox, 1993). Research indicates that a great variation in attitudes, beliefs, and cognitive functioning exist based upon characteristics of race, gender, and age (Cox, 1993). Moreover, Cox cites work done with colleagues (McLeod, Lobel, and Cox, 1993) indicating that ideas generated in a brainstorming exercise by racially diverse groups of Asians, Blacks, Whites, and Latinos generated ideas of the same quantity, but of higher quality, than ideas generated by racially homogeneous groups.

By citing evidence regarding the "group think" (Janis, 1982) phenomenon, Cox's (1993) synthesis of research indicates that diverse groups are more likely to do a better job of problem solving than are more homogeneous groups. Because of the tendency for homogeneous groups to be inordinately concerned with maintaining cohesiveness, they are more likely to be victims of this problem. Nemeth (1985 cited in Cox, 1993) and Nemeth and Wachter (1985 cited in Cox, 1993) found that groups with minority members were more likely to generate higher levels of critical analysis in problem solving than were groups that were homogeneous. Cox (1993) argues that "culturally diverse workforces have the potential to solve problems better because of several factors: a greater variety of perspectives brought to bear on the issue, a higher level of critical analysis of alternatives, and a lower probability of group think" (p. 35).

The final organizational benefit of diversity identified by Cox (1993) has to do with evidence of greater organizational flexibility in organizations that have a greater representation of racially diverse members. Research evidence suggests "that members of racial/ethnic minorities groups tend to have especially flexible cognitive structures" (Cox, 1993, p. 35). Moreover, Cox (1993) contends that the process of managing diversity itself is likely to lead to greater organizational flexibility.

In addition to the many benefits that accrue to more diverse organizations, Cox (1993) identifies a set of problems that may result as organizations make efforts to diversify themselves. Diversity can lead to lower levels of cohesiveness in groups. Cohesiveness is much easier to achieve in groups that are more homogeneous. While cohesiveness has been shown to lead to higher levels of morale and better communication, there is no evidence that cohesiveness enhances work performance (Cox, 1993).

Organizations that are more diverse also tend to have less effective communication. Because of greater difficulty in communications, members' anxieties may rise, conflict may increase, and members may feel less comfortable with membership in the group (Cox, 1993). Similarly, theory and research in race relations suggests that conflict increases as the presence of minorities increases in a given organizational context (Blalock, 1967). These findings suggest that organizations must be purposeful and deliberate in their movement to diversify. In the end, Cox (1993) asserts that the advantages of more diverse organizations far outweigh the disadvantages.

In certain respects then, culturally diverse workgroups are more difficult to manage effectively than culturally homogeneous workgroups. In view of this, the challenge for organizations . . . is to manage in such a way as to

maximize the potential benefits of diversity while minimizing the potential disadvantages (Cox, 1993, p. 39).

The Institutional Effects of Diversity in Higher Education

In a case study of a higher education institution that documented the organizational changes that occurred as it engaged in a process of transformation from being monocultural to multicultural, Bensimon (1995 cited in Smith and Associates, 1997) identified a number of organizational attributes that aided in this transition. These included strong institutional leadership, the creation of a new institutional mission statement, the appointment of women and people of color to the president's cabinet, the appointment of Black and Latino faculty members, and a commitment to multicultural curricular transformation. These findings are similar to those of other recent national studies that have linked curricular change, diversity in leadership, institutional commitment and mission, and levels of community to institutional effectiveness (Musil, García, Moses, and Smith, 1995; Nettles and Hudgins, 1995; Sedlacek, 1995 cited in Smith and Associates, 1997)

The Impact of a Diversified Faculty

There is an emerging body of research that helps us to understand the ways in which a more diverse faculty in colleges and universities influence the educational endeavor. Perhaps most germane to this discussion are the ways in which teaching and learning are enhanced by the inclusion of a diverse faculty.

Research on factors that influence the types of teaching methods used by faculty indicate that faculty background characteristics contribute greatly to the learning process (Easton & Guskey, 1983; Kozma, Belle, & Williams, 1978). Milem and Astin (1992) found gender to be a positive predictor of student-centered teaching practices. The researchers investigated science faculty's teaching techniques and found that women faculty in the sciences were more likely to utilize active learning techniques such as class discussion, student-selected topics and student-developed learning than men faculty in that field. In a related study, Milem and Wakai (1996) found the race and gender of faculty were important predictors of the likelihood that faculty would use student-centered approaches in the classroom. They found that women, as well as faculty who were African American, Native American, Mexican American, and Puerto Rican, were more likely than their other colleagues to use feminist pedagogy in the classroom. In a related study, Milem (1997) found a similar pattern of relationships between race and gender and teaching related outcomes. Specifically, women and faculty of color were more likely to use active learning techniques in the classroom, to include the perspectives of women and racial/ethnic minorities in the curriculum, to engage in research on issues of race/ethnicity, and to attend workshops designed to help them incorporate the perspectives of women and racial/ethnic minorities into the curriculum of their courses. Statham, Richardson and Cook (1991) examined gender and university teaching and found female professors to be more likely than male professors to encourage students' input and independence, and to view students as active collaborators in the learning process.

Other faculty characteristics that may influence teaching methods include academic rank and social status. Statham, Richardson and Cook (1991) found that assistant professors were more likely to adopt participatory teaching practices than full professors. Mulkey's (1972) study on social status and innovation among scientists found that low status or young scientists were more likely to be academically innovative since deviation from social norms posed little threat to their careers. In researching social status, Merton

(1973) considered “outsiders” of an institution as individuals having lower status and being frequently frustrated by the social system. Merton asserted that outsider status provides individuals with special perspectives and insights that may lead them to inquire into problems relevant to their group and may cause them to develop unique solutions. Similarly, Hill Collins (1986) has written persuasively about the insight and perspective offered by those who have “outsider” status within colleges and universities.

As teachers, “outsiders” may be more likely to be sensitive to classroom dynamics that are taken for granted by insiders. Gumpert’s (1987) study of the emergence of feminist scholarship supports the notion that personal status (being new, marginal or an outsider to a field of study) may influence reform efforts. The group Gumpert identified as “Pathfinders” were feminist scholars politically active during the women’s movement. They tended to remain peripheral to mainstream academic life since the academy’s traditional values were contrary to their own political and intellectual agendas. Outsider status may have provided the pathfinders with a unique perspective that enabled them to work for innovative reform. The tendency for the pathfinders’ outsider status to facilitate their work for reform may also be applicable to other under-represented groups such as faculty of color.

Furthermore, there is support suggesting that professors’ teaching practices are influenced by their professional interest in feminist issues. The research, writing and promotion of feminist pedagogy have primarily come from scholars who are committed to feminist issues. Klein (1987) states that feminist pedagogy developed from the work of women who were active politically and academically in feminist issues and transferred their activities directly from the feminist movement to their classrooms. In their introduction to *Gendered Subjects*, Culley and Portuges (1985) assert that practitioners of feminist pedagogy are aware of the ways in which traditional pedagogy may reproduce discriminatory, even destructive, attitudes and expectations about women. Therefore, they are likely to use their knowledge of feminism to restructure and revitalize the ways in which knowledge is acquired, sanctioned and perpetuated.

In a recent study of the impact of a diverse faculty on the research, teaching, and service missions of the university, Milem (1999) found that being a woman or a faculty member of color were important factors in predicting different outcomes related to the diverse missions of the university. The findings of this study provide empirical evidence that supports the assertion that the inclusion of women and people of color as faculty members in higher education enriches the three primary missions of the university (teaching, research, and service). Race and gender served as significant predictors of the use of active learning methods in the classroom. These methods have been shown to positively influence the learning process for students. Moreover, the use of active pedagogy provides students with an opportunity to interact with others who are different than they are in their classes through class discussions, collaborative learning methods, and group projects. Research suggests that these activities contribute to a more supportive campus climate for diversity and lead to positive outcomes for the students who are involved (see e.g., Astin, 1993; Chang, 1999; Gurin, 1999; Hurtado, Milem, Clayton-Pedersen, and Allen, 1998, 1999; Smith and Associates, 1997). Moreover, a diverse faculty provides students with a greater opportunity to encounter readings and research that address the experience of women and members of different racial/ethnic groups. This is another form of “interaction”- an interaction with diverse ideas - that can lead to positive outcomes for students. Moreover, for students of color, this provides them with an opportunity to see aspects of their experience represented in the curriculum. This interaction with diverse course content provides all students with opportunities to understand the experience of others who differ from them in various ways.

Regarding the research mission of the university, faculty of color and women faculty expand the boundaries of what we know through the research that they do. Specifically, they are much more likely than white faculty are to engage in research that extends our knowledge of issues pertaining to race/ethnicity and women/gender in society. Finally, the findings of this study suggest that faculty of color and women engage in service related activities with greater relative frequency than their other colleagues do (Milem, 1999). These findings suggest that students who attend institutions with higher proportions of women, faculty of color, and/or who are feminists are more likely to find faculty who are student-centered in their orientation to teaching and learning. They are also more likely to find a curriculum that is more inclusive in its representation of the experiences and contributions of women and racial/ethnic minorities in society. Finally, they are more likely to find faculty who are actively engaged in research on issues of race and gender.

The nature of the organizational climate at colleges and universities can also shape the teaching and learning enterprise (Austin, 1996; Berger, 1997; Berger and Milem, in press; Bowen, 1977; Finkelstein, 1984; Milem, 1997). Organizational climates are valuable to examine when assessing college environments because they are proximal to individual experiences and therefore have the potential to influence personal behaviors (Dey, 1991). Mauksch (1980) suggests that institutional climate is linked to teaching practices because it provides faculty with the social norms for teaching.

Astin (1993) found that student-oriented climates produce more positive student outcomes than almost any other environmental variable (Astin, 1993). In a study of the impact of diversity on college and university faculty, Milem (1997) found that measures representing different components of the institutional climate for diversity at colleges and universities were significant predictors of teaching outcomes. Specifically, if faculty perceived other faculty at their institution to be more student centered in their pedagogical approaches and/or to place greater value on diversity, these faculty were more likely to report that they had employed active teaching methods in the classroom, modified their curriculum to insure that the perspectives of women and racial/ethnic minorities were represented, attended faculty development sessions designed to assist them in incorporating these issues into the content of their courses, and engaged in research on issues of race/ethnicity. These findings indicate that the organizational climate matters and that the climate is shaped directly and indirectly by greater representation of women and people of color on the faculty (Milem, 1997).

Summary

A recent study by the RAND Corporation indicates that colleges and universities are producing students with high levels of domain or technical skills. However, the results of this study indicate that college graduates lack crosscultural competencies, which have been identified by leaders of multinational corporations as a primary human resource need for workers in an increasingly diverse domestic and global economy. Racially and ethnically diverse campuses provide a perfect environment within which students can develop these badly needed competencies.

Research on the organizational impact of diversity suggests that, when managed correctly, diversity benefits organizations by helping to attract the best available human talent, enhancing marketing efforts, increasing creativity and innovation, improving problem-solving abilities, and improving organizational flexibility.

In research on the impact of a diverse faculty in higher education institutions, findings indicate that women faculty and faculty of color enhance an institution's ability to achieve the primary missions of research, teaching, and service. Moreover, emerging

evidence suggests that an organizational climate that values diversity can positively influence the use of student-centered practices in the classroom.

Societal Benefits

The societal benefits of campus diversity are defined as the ways in which diversity in colleges and universities impacts quality of life issues in the larger society. Perhaps of most prominence here are the ways in which a diverse workforce and diverse student enrollments contribute to the achievement of democratic ideals of equity and access, the development of an educated and involved citizenry, and the provision of services to groups in our society who are badly underserved.

This chapter examines these issues by discussing research that has been conducted in four broad areas regarding how diversity advances societal outcomes. The first part of this section begins with a summary and discussion of a recently completed review of research literature pertaining to affirmative action in employment. The second part of this section considers what the return on investment is on money that is invested in federal financial aid programs. The third part of this section discusses findings regarding levels of involvement in civic and community service by Black students who attended the selective institutions in the Bowen and Bok (1997) study. Finally, the discussion of the societal benefits of diversity concludes with an examination of the health care crisis that exists in low income urban and rural communities and evidence that indicates that physicians of color have been uniquely willing (and able) to provide service to patients in these areas.

Research on the Impact of Affirmative Action in the Workplace

The tension between affirmative action and merit is the inevitable result of the conflict between our national values and what actually occurs in the nation's workplaces. As long as discrimination is more pervasive than affirmative action, it is the real threat to meritocracy. But because no one will join the debate on behalf of discrimination, we end up with the illusion of a struggle between affirmative action and merit (Reskin, 1998, p. 84).

Although many Americans would prefer a labor market that never takes race or gender into account, as long as employers and employment practices routinely discriminate against minorities and women, the choice is not between meritocracy and affirmative action, it is between discrimination and affirmative action (Reskin, 1998, p. 93)

On behalf of the American Sociological Association, Barbara Reskin (1998) recently completed a review of the research literature regarding the impact of affirmative action programs in employment. This review of research indicates that affirmative action programs have increased the representation of minority men and women in the workforce. Moreover, evidence suggests that affirmative action in employment has led to greater access to professional, managerial, and craft occupations among minority men and women (Reskin, 1998). Evidence also suggests that affirmative action in employment has lessened wage discrimination in our society. Carnoy (1994 cited in Reskin, 1998) estimated that at least one third of the earnings gains for African American and Latino workers during the 1960s can be attributed to declines in wage discrimination resulting from anti-discrimination legislation and affirmative action programs.

Reskin (1998) summarized findings from a number of studies that compared outcomes for firms with and without affirmative action programs. These studies suggest that opportunities for White women and African American men were much greater at firms that practiced affirmative action than at firms that did not. Moreover, other studies indicate that employment discrimination is less likely to occur in firms and industries that actively promote affirmative action in employment. Research evidence suggests that occupational segregation has steadily decreased over the past three decades (Reskin, 1998). Reskin summarizes these findings by asserting that “by preventing discrimination, affirmative action has opened thousands of jobs to women and minorities that discrimination had formerly closed to them” (p. 54). While the decline in occupational segregation has been accompanied by a decline in wage disparities, these disparities do still exist.

Affirmative action programs in employment have been shown to have a positive impact on individual workers by raising the career aspirations of minorities and women (Reskin, 1998). In the same way in which some people respond to a perception that they have limited opportunities in a given field by lowering their aspirations, research indicates that they will *pursue* opportunities in fields that they perceive to be open to them (Kanter, 1977; Reskin and Hartmann, 1986; Markham, Harlan, and Hackett, 1987; Jacobs, 1987; Cassirer and Reskin, 1998 cited in Reskin, 1998). By reducing the perception that discriminatory barriers block access to certain lines of work, affirmative action curtails self selection that minorities and women engage in with some jobs and/or promotions (Reskin and Roos, 1990 cited in Reskin, 1998).

One of the criticisms levied by opponents of affirmative action is that it causes the beneficiaries of these programs to engage in a process of self-doubt regarding their abilities and qualification for the jobs that they have received (Steele, 1990 cited by Reskin, 1998). However, research evidence suggests that stigmatization by others is a much greater risk than is self-stigmatization. Moreover, research indicates that employers can greatly reduce the risk of stigmatization by providing accurate information regarding how their affirmative action programs work (Reskin, 1998).

There are a number of things that we can learn from research done on the successful implementation of affirmative action in employment. Key among these are the organizational attributes that facilitate success in the planning and implementation of affirmative action programs. The commitment of an organization’s top executives to eliminating discrimination is critical (Shaeffer and Lynton, 1979; Beilby and Baron, 1984; O’Farrell and Harlan, 1984; Vernon-Gerstenfeld and Burke, 1985; Thomas, 1990; Konrad and Linnehan, 1995 cited in Reskin, 1998). By formalizing employment practices in a way that reduces subjectivity and cronyism, employers are able to draw upon more diverse talent pools (Reskin, 1998). Firms must develop personnel practices that are perceived to be fair by all employees. As part of this, successful firms educate employees regarding their employment procedures (Leonard, 1994, cited Reskin, 1998). Firms with equal employment opportunity or affirmative action offices were much more likely to be involved in affirmative action recruiting (Reskin, 1998). The existence of affirmative action goals seems to facilitate equity, regardless of whether the organization actually meets the goals it sets for itself (Leonard, 1985 cited in Reskin, 1998). However, the most effective institutions are those that monitor their progress toward achieving their goals. As a part of this monitoring and assessment process, institutional effectiveness is increased in those firms that have a means for providing both positive and negative sanctions to managers with responsibility for meeting organizational goals regarding affirmative action (Reskin, 1998).

Much of the resistance to affirmative action programs comes from those who perceive that they are at risk of being penalized somehow by affirmative action. One of the most frequent criticisms of affirmative action is that it involves “reverse discrimination”. Reskin’s review of research suggests that “reverse discrimination is rare both in absolute terms and relative to conventional wisdom” (p. 72). Steeh and Krysan (1996 cited in Reskin, 1998) found that only 5 to 12 percent of Whites indicated that they felt that their race had cost them a job or promotion. Conversely, more than one third of the African Americans surveyed reported similar beliefs. However, between 66 percent and 80 percent of Whites (compared to one quarter of African Americans) surveyed during the 1990s reported that they thought African Americans with lower qualifications were given jobs or promotions over “more qualified” Whites (Taylor, 1994; Davis and Smith, 1994; Steeh and Krysan, 1996 cited in Reskin, 1998).

Data from the EEOC indicated exceptionally low proportions of reverse discrimination charges in employment. Only four percent of the discrimination claims filed with the EEOC between 1987 and 1994 charged reverse discrimination (Norton, 1996 cited in Reskin, 1998). Moreover, of the cases that actually made it to court between 1990 and 1994, only two percent charged reverse discrimination (US Department of Labor, Employment Standards Administration, cited in Reskin, 1998). “Finally, allegations of reverse discrimination are less likely than conventional discrimination cases to be supported by evidence” (Reskin, 1998, p. 73).

In the conclusion to the monograph, Reskin argues that while affirmative action in employment has been successful, the evidence does not suggest that it is time to end affirmative action. Despite the progress that has been made, affirmative action programs in employment remain necessary.

Despite the impact of anti-discrimination laws on job integration and the good-faith efforts of many employers to diversify their workforces, the strength of habit in people’s ways of thinking and organizations’ ways of doing business means that more concerted efforts are necessary to eliminate discriminatory barriers. Weakening or ending affirmative action at the very least would slow the progress that minorities and women have made in entering the economic mainstream. The erosion in the relative economic standing of African Americans during the 1980s stemmed in part from the hiatus in affirmative action enforcement. Without government pressure for affirmative action, cronyism will reign supreme, and those protected by affirmative action as well as others who lack the right connections will stand to lose. Eliminating affirmative action will increase job discrimination based on sex and race and the wage gap between white men and other groups (Reskin, 1998, p. 92).”

Return on Investment of Financial Aid

Without a doubt, since its inception, financial aid has facilitated the enrollment of more diverse students on college campuses. In reviews of the research regarding the impact of student financial aid, researchers found that financial aid generally does what it was created to do — it increases access to higher education (St. John 1991a; Stampen & Fenske, 1988). Financial aid increases the probability that students will attend college. While all forms of aid have been found to be positively associated with the decision to attend college when *all* students are considered, not all forms of aid have been found to be equally effective in promoting access for students from historically disadvantaged backgrounds. Aid packages with loans have been found to be less consistently significant

in facilitating access for minority applicants than they are for white applicants (St. John, 1991a). In a study of the high school class of 1982, St. John (1991a, 1991b) found that the enrollment decisions of low-income students are price responsive to grants but not to loans, while middle income students are more price responsive to loans than to grants. Several researchers suggest that increases in federal student grant funding would be the most efficacious way to promote minority access in the short run and should also be an essential element of any long term strategies devised to increase both access and persistence (St. John, 1991b; Astin, 1982).

Another way to consider the value of federal financial aid programs is to consider how our society may benefit from the long-term investment of federal funds in the students who receive them. St. John and Masten (1990) used human capital theory to provide a framework for determining what the return on investment is for each federal dollar that was spent on student financial aid for students from the graduating high school class of 1972. In this study, the authors suggest that the money that students receive from federal aid sources be viewed as a form of investment. The return on this investment is defined as the increased tax revenues that can be attributed to the gains in educational attainment that result from the investment of these federal aid dollars. The authors created a series of econometric prediction models that were based upon the concept of cash-flow ratios (Windham, 1979 cited in St. John and Masten, 1990) to calculate a range of returns on investment. The “Worst Case” model indicated a return on investment of \$1.40 while the most “Optimistic” model indicated a return on investment of \$28.80 for each dollar of federal aid money invested. Applying the model that used the most reasonable economic assumptions and also provided an adjustment for the effect of background factors in predicting income, the authors concluded that each dollar invested in student aid during the 1970s yielded a return of \$4.30. In other words, for every dollar that was invested in federal aid programs during the 1970s, this created an additional \$4.30 in tax revenues that otherwise would not have been collected.

This return on investment of federal funds is substantially higher than what the authors calculated the government would have received if they had invested this money in a bank. Hence, “student financial aid is a profitable area of public investment, perhaps more profitable than any other way the federal government can use its funds . . . Therefore, the failure to invest in student financial aid is short sighted, if not foolish, given the high level of federal debt that will confront future generations” (St. John and Masten, 1990, p. 20). The increased diversification of higher education makes sound economic sense for our society. Greater access to higher education, especially through programs such as federal financial aid, produce greater tax revenues that may help to “ease the debt burden for future generations” (St. John and Masten, 1990, p. 21).

Civic and Professional Involvement

Bowen and Bok (1998) argue that one of the central goals of higher education institutions is to educate students who will become good citizens. Hence, many institutions of higher education select their students based upon a belief and expectation that their students will go on to give something back to society through their involvement in professional, social, and civic organizations. Furthermore, the authors argue that in recent years, these institutions have extended their belief in the value of this mission to the need to diversify their student bodies. Institutions of higher education have come to understand their obligation to educate and to develop an expanded pool of “[b]lack and Hispanic men and women who could assume leadership roles in their communities and in every facet of national life” (Bowen and Bok, 1998, p. 156).

In their study of Black and White students who attended institutions with selective admissions policies, Bowen and Bok (1998) found that Black students who attended these institutions were likely to be widely involved in civic and community activities. Findings from analyses of their 1976 cohort of students indicated that Black students were more likely than their white peers were to be involved in community and civic organizations. Moreover, Black men were much more likely than white men were to be involved in leadership positions in organizations with a civic focus. This was especially true in organizations focusing on social service, youth, and school related activities. Black women were more likely than white women were to report that they held leadership positions “in community, social service, alumni/ae, religious, and professional groups” (p. 160). Finally, Black students were more likely than White students were to report that they held multiple positions of leadership in different civic and community organizations.

The findings from the 1989 cohort in this study suggest that students become involved in service activities early on. Patterns of involvement of the 1989 cohort were quite similar to students from the 1976 cohort. Even though these students were not at a point in their personal or professional lives where they were “settled in a community” (p. 162), over 40 percent of Black men reported that they were involved in community service and 12 percent reported serving in leadership roles (a rate that was three times higher than white men). The authors report that “the percentages for the [b]lack women are equally impressive” (p. 162). Multivariate analyses of these data indicate that there was an indirect relationship between attending the most selective institutions and being involved in leadership positions in community and social service organizations. While Black students who attended the most selective institutions were more likely to be involved in leadership positions, this was explained largely by the fact that these students were more likely to have obtained advanced degrees than their peers were at other (less) selective institutions.

Black students who obtained advanced degrees were more likely than their white peers were to be involved in community and social service organizations. This holds true for lawyers (21 percent Black involvement as compared to 15 percent for whites), physicians (18 percent for Blacks as compared to 9 percent for whites), and most dramatically for Ph.D.s (33 percent for Blacks as compared to only 6 percent for whites).

The [b]lack alumni/ae of these schools have already demonstrated a marked tendency to “give something back” through participation and leadership outside the workplace as well as within it. This civic spirit, revealed through actions taken rather than good intentions expressed, and demonstrated over time through volunteering in schools, neighborhoods, museums, and civic associations of every kind, is surely one important indicator of “merit.” (p. 192).

Benefits Accruing from the Diversification of the Medical Profession

Producing a physician work force that reflects this country’s rich diversity is important not only for reasons of social equity, but also to ensure the delivery of health care that is competent both technically and culturally (Nickens, Ready, and Petersdorf, 1994, p. 472).

The health care crisis faced by residents of low-income communities and low-income communities of color, specifically, is striking. This crisis is due largely to insufficient access that people who live in these communities have to health care

providers. The national average for physician to population service ratio is 1 physician for every 387 people. However, more than 2,700 areas in our country have been identified as having a shortage of health professional coverage. These areas average 1 physician for every 3,500 people or more (Health Resources and Services Administration, 1995). Approximately one person in five in our country lives in an area designated as having insufficient health care coverage. These areas are found in rural and urban settings across the United States. In low income neighborhoods in Chicago, Los Angeles, Houston, and New York, the ratio of physician to population can be as high as 1 physician for every 10,000 to 15,000 people (Ginzberg, 1994). When the physician to population ratios in underserved communities are contrasted with these ratios in affluent communities; the differences that can be seen are staggering. While low income people of color in Los Angeles face a physician to population ratio of between 1 to 10,000 or 15,000, residents of Beverly Hills, California enjoy a physician to population ratio of 1 physician to 25 or 30 people.

Living in poverty dramatically increases the likelihood that a person will live in an area that has been designated as having insufficient health care coverage. In 1995, 11.2 percent of Whites in our society lived at or below the poverty level. The figures for Blacks and Hispanics¹ (U.S. Bureau of Census, 1998) were dramatically higher. Census data estimate that nearly one in three Blacks (29.3 percent) and Hispanics (30.3 percent) lived in poverty in 1995. We see even greater disparities when we examine the poverty rate for children who were born in 1995: 41.5 percent of Black children and 39.3 percent of Hispanic children were born into families at or below poverty level while 15.5 percent of White children faced being born to similar economic circumstances.

Statistics reported by the Bureau of Census (1998) tell us something about the consequences of this crisis, particularly regarding the effects that it has on people of color in our country. These data reveal that the infant mortality rate for Black children in our country remains significantly higher than for White children. In 1995, for every 1,000 births that occurred, 16.22 Black male babies and 13.74 Black female babies died before they reached the age of one year. Conversely, only 6.98 White male babies and 5.55 White female babies faced a similar fate. Moreover, White children can expect to live significantly longer lives than Black children do. The life expectancy for White men in 1995 was 73.4 years as compared to 65.2 years for Black men. For white women, the life expectancy was 79.6 years as compared to 73.9 years for Black women (U.S. Bureau of Census, 1998). These data clearly document the need for better medical care to underserved communities in our country.

The medical community has extensively utilized research to document the societal value that has accrued from the participation of racial and ethnic minorities in their profession. There has been a long history of underrepresentation of minorities and women among the ranks of physicians in our country. In regard to the preparation and training of Black physicians, it was not until 1974 that the number of Black medical students in other medical schools exceeded the enrollment of students at Howard University and Meharry Medical College (Gray, 1977).

The Association of American Medical Colleges recognized the need to actively support and encourage the enrollment of underrepresented students in medical school when it launched its Project 3000 by 2000 program in the early 1990s. This program has the goal of doubling the enrollment of underrepresented minority physicians by the year 2000. A central goal of this program has been to increase the number of physicians from underrepresented groups to meet the health care needs of the most underserved

¹ This label for Latinos is used because it is the label that is used in Bureau of Census reports.

populations in our society (Nickens, Ready, and Petersdorf, 1994). As part of this program, the AAMC recognized that a first step in addressing the health care needs of low income communities and low income communities of color was to train more physicians of color. An emerging body of research evidence indicating that physicians of color are more likely than White physicians to provide care for these underserved populations supported this recognition.

Keith, Bell, Swanson, and Williams (1985) have been widely cited as the first group of scholars to provide empirical evidence that supports the assertion that minority physicians were significantly more likely than their white counterparts to provide health care to populations in our society who need it the most. This was reflected in the type of medicine that minority doctors practiced as well as in the geographic area in which they practiced medicine. Nearly one third more minority doctors chose primary care specialties than did nonminority physicians (55 percent to 41 percent). Moreover, physicians of color were more likely to practice in areas that had been designated as health-manpower shortage areas by the federal government. In fact, minority physicians were twice as likely as nonminority doctors were to practice in these areas (12 percent vs. 6 percent). This geographic pattern was found for all of the medical subspecialties included in the sample (not just primary care physicians). Finally, minority graduates were more likely to have Medicaid recipients as patients than were nonminority graduates (31 percent for Blacks, 24 percent for Latinos, and 14 percent for whites). Based on their findings, the authors argue that “by increasing the number of minority physicians, affirmative action programs have substantially improved access to care among minority populations” (Keith, et al, 1985, p. 1523).

Recently, Komaromy, Grumbach, Drake, Vranizan, Lurie, Keane, and Bindman (1997) used data from the AMA masterfile to build upon the findings of Keith, et al (1985) in their study of the practice patterns of physicians in California. The researchers used U.S. Census data to determine the demographic characteristics of the areas in which these physicians practiced medicine. The goals of the study were threefold. First, the study analyzed the distribution of physicians and how it related to the demographic characteristics of California communities². Second, the study examined the relationship between physicians’ race or ethnic group and the characteristics of the communities where these physicians located their practices. Finally, the study considered the relationship between the race and ethnic group of physicians and the racial or ethnic distributions and insurance status of patients.

The study findings indicated that areas with the worst physician to population ratios were found in urban areas of poverty with high proportions of Black and Latino residents. Poor urban areas that had low proportions of Black and Latino residents had nearly three times as many primary care physicians as areas with high proportions of Blacks and Latinos. The salience of race in availability of health care is further illustrated by the fact that communities with high proportions of Black or Latino residents were four times as likely as others to experience a shortage of physicians, regardless of level of community income (Komaromy, et al, 1997).

Latino and Black physicians were more likely to locate their practices in areas with the greatest need for primary care doctors. They also tended to be located in poorer areas than those of white physicians. Black physicians practiced medicine in areas where the mean percentage of Black residents was five times greater than those where other

² For the purposes of their study, the authors defined areas with shortages of primary care physicians as those with fewer than 30 office-based primary care physicians per 100,000 population.

physicians practiced. Similarly, Latino physicians practiced in areas with significantly more Latinos.

Finally, Black physicians cared for six times as many Black patients as did other physicians. Latino physicians cared for three times as many Latinos as did other physicians. These findings held in multivariate analyses after controlling for the fact that greater proportions of people from these groups lived in the areas where these physicians practiced. Black physicians were the most likely to care for patients who were insured by Medicaid (45 percent of their patients as compared to 18 percent for white physicians, 24 percent for Latino physicians, and 30 percent for Asian physicians). Latino physicians were more likely to provide care to patients without insurance (9 percent as compared to 3 percent for Black physicians, 4 percent for Asian physicians, and 6 percent for white physicians). Black and Latino physicians play an essential role in providing health care for poor people and members of minority groups (Komaromy, et al, 1997).

Other recent studies report similar findings. Cantor, Miles, Baker, and Barker (1997) found that minority and women physicians were much more likely to serve minority, poor, and Medicaid recipients than were nonminority male physicians. Moreover, while there was a weak relationship between socioeconomic background of the physician and the tendency to serve these populations, race and sex were the strongest and most consistent variables that predicted physicians' decisions to practice in these areas. Through the use of a longitudinal sample, the authors assert that physicians' decisions to practice in these areas are likely to remain stable over time.

Xu, Fields, Laine, Veloski, Barzansky, and Martini (1997) examined data from a national sample of physicians who graduated in 1983 or 1984 and found that after controlling for gender, family income, residence, and National Health Services financial aid obligations, primary care physicians from underrepresented groups were more likely than nonminority physicians to care for medically underserved populations (defined in this study as the mean percentage of patients with Medicaid and poor patients in the physicians' practice). Findings from this study reveal that over half of the Black physicians and one quarter of the Chicano/Latino physicians indicated that they had National Health Service obligations as compared to only 10 percent of their white and 8 percent of their Asian American colleagues. One could argue that an obligation to the National Health Service (and not race/ethnicity) accounts for the findings regarding a greater likelihood of service to underserved populations. However, after controlling for the effects of this obligation in multivariate analyses, race/ethnicity of physicians remained as significant positive predictors of service to underserved populations.

Similar findings are reflected in analyses of national data from the Association of American Medical Colleges (AAMC, 1994). In 1993, 40 percent of students graduating from medical schools who were members of underrepresented minorities (Blacks, Mexican Americans, mainland Puerto Ricans, and American Indians) indicated that they planned to practice medicine in underserved areas. Less than 1 in 10 (9 percent) of other medical school graduates expressed a similar desire. Nearly 6 in 10 medical generalists from underrepresented groups reported that they planned to practice in these areas as compared to just 24 percent of other graduates who were preparing for generalist careers.

Moy and Bartman (1995) explored the relationship between the race of physicians and the likelihood that they would provide care to minority and medically indigent patients. This study provided a different twist on analyses of these questions by being the first of its kind to use data gathered from a nationally representative sample of patients using the 1987 National Medical Expenditure Survey (NMES). The study sought the answers to three related research questions. First, were nonwhite physicians more likely to provide care to racial and ethnic minority patients? Second, were nonwhite physicians

more likely to provide care to medically indigent patients? Finally, did nonwhite physicians provide care to patients who were sicker? The findings of the study provided affirmative responses to all three questions. Racial and ethnic minorities were more than four times as likely to report that they received care from nonwhite physicians than were white patients. Moreover, patients who were low-income, Medicaid recipients or non-insured were more likely to receive care from nonwhite physicians. Finally, patients who reported that they were in worse health, had visited an emergency room, or who had been hospitalized were also more likely to report that they received their care from nonwhite physicians. These findings held in multivariate analyses that controlled for the effects of physician sex, specialization, and workplace and geographic location.

Each of the studies that has been profiled point to the important role that physicians of color play in addressing the health care needs of the most medically underserved communities in our society. Physicians of color are significantly more likely to pursue medical specialties that address the needs of these people and to locate their practices in areas that will serve the medically underserved. Moreover, the saliency of race in predicting service to these communities holds even after controlling for the effects of socioeconomic status, gender, and National Health Service financial obligations. Hence, any plans to alter affirmative action to focus on economic disadvantage or to eliminate it altogether would further imperil the people who live in the most medically underserved communities in our country. As was discussed earlier, this includes one in five Americans.

In spite of this compelling evidence and the calls for increased enrollment of students of color in medical schools, obstacles to the goal of parity in the population of physicians have occurred with recent changes to affirmative action policy in California and similar threats in other states. Between 1990 and 1994, 5 of 10 medical schools that produced the highest percentage of underrepresented students were in California. Four of them were public institutions and University of California campuses (San Francisco, Davis, San Diego, and Irvine). The other was Stanford University. The impact of Proposition 209 and the Regents decision (SP-1) on the enrollment of students of color at medical schools at the University of California campuses have been dramatic.

Of the remaining five campuses that produced the most physicians of color, three were HBCUs—Meharry, Morehouse, and Howard. The two remaining campuses were the University of Illinois and the University of Michigan. Legal challenges to affirmative action in undergraduate and graduate admission are currently pending against the University of Michigan. How the outcomes of these cases will affect the enrollment of students of color at the University of Michigan’s medical school is yet to be determined.

Summary

The findings of the research in the four broad areas discussed in this section of the manuscript indicate that there are appreciable ways in which our society benefits from increased diversity. Research on the outcomes of affirmative action in employment is helpful to our understanding of the value of affirmative action in higher education. Reskin’s (1998) review of research indicates that affirmative action in employment has led to decreased job discrimination, decreased disparities in wages, decreased occupational segregation, increased occupational aspirations for women and people of color, and greater organizational productivity. Moreover, contrary to the assertions of many critics of affirmative action, Reskin found little empirical evidence that affirmative action leads to self-stigmatization on the part of those who benefit from affirmative action. Finally, Reskin (1998) found that evidence supporting charges of reverse discrimination are “rare both in absolute terms and relative to conventional wisdom” (p.

72). Hence, affirmative action in employment has made hiring practices more equitable and has increased access to occupations for women and people of color.

While federal financial aid programs were initially created to increase access to higher education for students from historically disadvantaged background, research indicates that expanding opportunities for access to higher education also makes good fiscal sense. Investing in the education of students from low-income backgrounds provides a significant return on investment of federal financial aid monies. St. John and Masten (1990) calculated that every dollar of federal aid money invested in members of the high school class of 1972 yielded a return of \$4.30 in increased tax revenues that were not likely to have otherwise been collected. There are few investments available that can produce such a high rate of return in such a short period of time.

Research evidence suggests that students of color benefit our society through their high levels of involvement in service to community and civic groups and through their service to medically underserved populations. Bowen and Bok (1998) found that the African American students were much more likely than White students to be involved in community and civic organizations and to be involved in the leadership of these organizations. Studies of practice patterns of physicians indicate that doctors of color are more likely to practice medicine in areas with populations that have the greatest need for health services in our society (low income urban and rural locations, locations with high populations of people of color, populations that rely on Medicare for their health insurance, and populations that do not have any health insurance).

Organizational Forces that May Make Diversity Difficult to Institutionalize³

In her manuscript summarizing the impact of affirmative action in employment, Reskin (1998) indicates that much of the race and sex discrimination that exist in the workplace are a function of the ways in which these firms do business. To illustrate this concept, Reskin offers two examples of factors that contribute to employment discrimination. The first occurs when employers rely heavily on informal networks to recruit their employees. The second occurs when firms require job credentials that are not necessary to do a job effectively. Reskin (1998) suggests that “structural discrimination persists because, once in place, discriminatory practices in bureaucratic organizations are hard to change” (p. 35). Reskin argues that bureaucratic organizations develop an inertia that tends to preserve these practices unless the organization is faced with genuine pressures to change itself.

This discussion of the role of organizational inertia in the business sector suggests that similar forces may exist in colleges and universities. This is particularly true when we consider that colleges and universities, like many private businesses and firms, are highly bureaucratic organizations. Hence, we must consider whether there are things that colleges and universities do as organizations that impede their efforts to centrally locate diversity as part of their institutional mission.

While the American higher education system is large, diverse, complex, and decentralized, it is at the same time remarkably homogeneous (Astin, 1985). This homogeneity can be seen in comparable approaches to undergraduate curriculum, remarkable conformity in the training and preparation of faculty, and similar administrative structures. Most educators view the higher education system from an institutional perspective as opposed to a systems perspective. This tendency toward an

³ This section of the manuscript relies heavily on the work of Dey, Milem, and Berger (1997); Milem, Berger, and Dey (1998); and Berger and Milem (in press).

institutional perspective often leads to the implementation of policies and practices that weaken the system as a whole (Astin, 1985).

Astin (1985, 1989, and 1991) argues that there is a tendency among higher education institutions to place too heavy of an emphasis on accumulating resources and enhancing their reputations. Astin asserts that excellence in American higher education has been traditionally equated with the academic reputation of an institution and/or with the resources it accumulates. In this traditional view of excellence, resources are measured by money, faculty, research productivity, and highly able students. Astin suggests that this traditional view of excellence results from the hierarchical nature of the higher education system.

A related perspective on these processes can be found in the concept of institutional isomorphism, first introduced by David Riesman (1956), also known as "institutional homogenization" or "institutional imitation" (Jencks and Riesman 1968; Pace 1974; DiMaggio and Powell 1983; Astin 1985; Levinson 1989; Hackett 1990; Scott 1995). In a discussion of the problem of institutional homogenization, Riesman observed "There is no doubt that colleges and universities in this country model themselves upon each other . . . All one has to do is read catalogues to realize the extent of this isomorphism" (Riesman, 1956, p. 25). He depicted the higher education system as being an "academic procession" which he described as a snake-like entity in which the most prestigious institutions in the hierarchy are at the head of the snake, followed by the middle group, with the least prestigious schools forming the tail. The most elite institutions carefully watch each other as they jockey for position in the hierarchy. In the meantime, schools in the middle are busy trying to catch up with the head of the snake by imitating the high prestige institutions. As a result, schools in the middle of the procession begin to look more like the top institutions while the institutions in the tail pursue the middle range schools. Ultimately, institutional forms become less distinctive, relatively little real change occurs in the hierarchy, and the system of higher education struggles to move forward. Jencks and Riesman (1968) suggest that strong economic and professional pressures drive isomorphism in higher education and conclude that homogenization occurs faster than differentiation.

These forces have led to the development of a highly refined status hierarchy in higher education comprised of a few well-known institutions at the top, a bigger group of institutions with more modest reputations in the middle, and the biggest group consisting of institutions at the bottom of the hierarchy that remain virtually unknown outside of their geographic region (Astin, 1985). Astin (1985) argues that the greatest consequence of this status hierarchy is conformity (Astin, 1985; Bowen, 1977; Riesman, 1956). This conformity is found in the institutional homogeneity described above. Another consequence of the institutional hierarchy is that it tends to create a great deal of competition among institutions for resources (as described above) "and for a higher place in the hierarchy as revealed in reputational surveys" (Astin, 1985, p. 12). Research indicates that the single best predictor of an institution's place in the hierarchy of institutions is its selectivity (or average score of the entering freshman class on the SAT) (Astin and Henson, 1977). Hence, it is easy to see why there are strong incentives for institutions to view their students as a resource that can be used to enhance an institution's reputation.

When students are viewed as educational resources that can enhance an institution's reputation, and not as the focus of the educational enterprise, there is great pressure to make institutional admissions policies more selective. Decisions to seek applicants with high standardized test scores are not made for on any compelling pedagogical or educational reasons. Rather, based upon this traditional view of

excellence, institutional leaders believe that higher standardized test scores bolster the institution's reputation, which in turn, will cause more students to want to apply to the institution (Astin, 1985). Faculty and administrators come to view selective admissions policies as being essential to the maintenance of academic excellence or standards. Hence, institutions and institutional excellence come to be defined more by the "quality" of the people they admit and not by the educational experience that people have while attending the institution (Astin, 1985).

This narrow view of educational excellence puts pressure on institutional leaders to place inordinate significance on standardized tests in the admissions process. When standardized test scores are used by institutional leaders as a means for enhancing their institution's reputation (i.e., "the average SAT score of our entering class is . . ."), test scores are clearly being used in a way that they were not intended. Using test scores in this manner serves to reinforce in the minds of constituents that test scores are the primary, or even the only, indicator of merit or quality. This view of merit is clearly antithetical to the definition of merit that is proposed in this manuscript.

The Importance of Thoughtful Institutional Responses to Diversity

Probably fewer areas of higher education and campus life in the recent past have had more attention paid to the policy dimension than has the issue of race on campus. Evidence of this can be found in policies and programs related to college admissions, financial aid, affirmative action, discrimination and harassment, and desegregation. Yet, at the same time, probably no area of campus life has been so devoid of policy initiatives than has the campus racial climate at individual institutions (Hurtado, Milem, Clayton-Pedersen, and Allen, 1998).

While this chapter has cited research and writing from a variety of sources that provide evidence of the many benefits that result from diverse college campuses, the focus of this discussion has not been on the importance of the institutional context(s) in which these benefits have been accrued. Having a diverse campus, in and of itself, does not guarantee that the educational benefits summarized in this chapter will accrue to students, to the institution, or to society. "Often neglected in the debate about diversity is the fact that achieving a racially diverse student body *by itself* is not sufficient to bring about desired educational outcomes. How that diversity is managed matters greatly" (Liu, 1998, p. 438). Later, Liu (1998) argues that "it is a mistake to understand the diversity rationale only as an issue concerning admissions rather than as an issue implicating broader institutional policy" (p. 439)

Thus, to establish a "compelling interest" in educational diversity, a university must demonstrate clear, consistent internal policies and practices designed to facilitate interracial contact, dialogue, and understanding on campus (Liu, 1998, p. 439).

Recent manuscripts document the importance of the institutional context in shaping student outcomes and provide a framework for conceptualizing and understanding the impact of various dimensions of the campus racial climate. This framework was first introduced in a study of the climate for Latino students (Hurtado, 1994) and further developed in syntheses of research done for policy-makers and practitioners (Hurtado, Milem, Clayton-Pedersen, and Allen, 1998, 1999).

When considering the climate for diversity on campus, Hurtado, et al (1998, 1999) argue that most institutions focus usually on only one element of the climate, the goal of increasing the numbers of racial/ethnic students on campus. While this is an essential goal that institutions must achieve, it cannot be the only goal. There are other elements of the climate that require attention and constitute key areas for focusing diversity efforts.

Hurtado, et al (1998a, 1998b) argue that central to the conceptualization of a campus climate for diversity is the notion that students are educated in distinct racial contexts. Both external and internal (institutional) forces shape these contexts in higher education. The external components of climate are comprised of two domains representing the impact of *governmental policy, programs, and initiatives* as well as the impact of *sociohistorical forces* on campus racial climate. The *institutional context* contains multiple dimensions that are a function of educational programs and practices. These include an institution's *historical legacy of inclusion or exclusion* of various racial/ethnic groups, its *structural diversity* in terms of the numerical and proportional representation of various racial/ethnic groups, the *psychological climate* that include perceptions and attitudes between and among groups, as well as a *behavioral climate* dimension that is characterized by the nature of intergroup relations on campus.

Hurtado, et al (1998, 1999) conceptualize the institutional climate as a product of these dimensions. These dimensions are not discrete, rather, they are connected with each other. For example, a historical vestige of segregation has an impact on an institution's ability to improve its racial/ethnic student enrollments, and the under-representation of specific groups contributes to stereotypical attitudes among individuals within the learning and work environment that affect the psychological and behavioral climate. In short, while some institutions take a "multi-layered" approach toward assessing diversity on their campuses and are developing programs to address the climate on campus, most institutions fail to recognize the importance of the dynamics of these interrelated elements of the climate.

Specifically, Hurtado, et al (1998, 1999) assert that many institutions pay attention only to increasing the structural diversity of their institution. When this happens, the outcomes of increased diversity are not necessarily positive. Race relations theory tells us that as the representation of minorities increases, the likelihood of conflict also increases. By paying attention to all aspects of the campus racial climate, colleges and universities are able to use this conflict in ways that are purposeful and to create positive educational experiences for students. This framework, and the many studies that are cited to illustrate it, indicate that institutional leaders must make thoughtful and deliberate decisions about how diversity adds to the educational mission of their institution. While Gurin (1999) argues correctly that structural diversity is necessary for other types of diversity to occur (diversity of ideas and information and diversity of interactions), increasing structural diversity alone is not sufficient for the benefits of diversity to transpire. Instead, actualizing the value-added educational benefits associated with diversity requires active engagement in institutional transformation (Chang, 1999). One of the conditions necessary for institutional transformation, for example, is the institutional commitment to and cultivation of diversity by institutional leaders. In short, it is becoming increasingly clear that only when the necessary conditions are in place, can colleges and universities fulfill their mission to serving the "compelling interests" of the individual, the institution, and the society.

Table 1
 Summary of the Educational Benefits of Diverse College and University Campuses

Type of Benefit		
<p><i>Individual Benefits</i></p> <hr/> <ul style="list-style-type: none"> ❖ Improved racial and cultural awareness ❖ Enhanced openness to diversity and challenge ❖ Greater commitment to increasing racial understanding ❖ More occupational and residential desegregation later in life ❖ Enhanced critical thinking ability ❖ Greater satisfaction with the college experience ❖ Perceptions of a more supportive campus racial climate ❖ Increased Wages for Men who Graduate from Higher “Quality” Institutions 	<p><i>Institutional Benefits</i></p> <hr/> <p style="text-align: center;">Benefits to Private Enterprise</p> <ul style="list-style-type: none"> ❖ Cultivation of workforce with greater levels of crosscultural competence ❖ Attraction of best available talent pool ❖ Enhanced marketing efforts ❖ Higher levels of creativity and innovation ❖ Better problem-solving abilities ❖ Greater organization flexibility <p style="text-align: center;">Benefits to Higher Education of Faculty Diversity</p> <ul style="list-style-type: none"> ❖ More student-centered approaches to teaching and learning ❖ More diverse curricular offerings ❖ More research focused on issues of race/ethnicity and gender ❖ More women and faculty of color involved in community and volunteer service 	<p><i>Societal Benefits</i></p> <hr/> <ul style="list-style-type: none"> ❖ More research on the Effects of Affirmative Action in the Workplace ❖ Higher levels of service to community/civic organizations ❖ Medical service by physicians of color to underserved communities ❖ Greater equity in society ❖ A more educated citizenry

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