

SPECTRUM



A report on underrepresented minorities in astronomy

Diversifying Our Profession: The Role of Minority Serving Institutions

by Keivan Guadalupe Stassun

In this issue of SPECTRUM we highlight the important role played by Minority Serving Institutions in preparing future minority physicists and astronomers.

Minority Serving Institutions include Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), and Tribal Colleges and Universities (TCUs). Examples include Howard University (Washington, D.C.), University of Texas at El Paso, and White Earth Tribal and Community College (Mahnomen, MN).

These institutions represent large—and largely untapped—pools of minority talent in science and engineering. For example, currently 30% of all post-secondary degrees going to African-Americans are earned at HBCUs. Moreover, students attending these schools are almost twice as likely to major in science and engineering fields as compared to minorities attending majority-White institutions (see chart, p. 3). Consequently, 31% of bachelor's degrees in

science and engineering earned by African-Americans are earned at HBCUs. The top ten producers of Black bachelor's degree recipients in physics are all HBCUs (see article, p. 4).

(Continued on page 3)



Xavier University of Louisiana, an Historically Black College, produces more Black graduates with Bachelor's degrees in physics than any other four-year institution in the United States.

CSMA Kicks Off at January 2002 Meeting in Washington, D.C.

by Keivan Guadalupe Stassun

The Committee on the Status of Minorities in Astronomy (CSMA) hosted a special session and a social mixer at the American Astronomical Society (AAS) Meeting in Washington, DC. Both events were very well attended, with active participation

from the Committee on the Status of Women in Astronomy (CSWA) and members of the Gay, Lesbian, Bisexual, Transgender, Queer astronomers (GLBTQastro) group.

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HIGHLIGHTS:

- Learn about the important role played by Minority Serving Institutions in preparing future minority physicists and astronomers.
- Read about recommendations for enhancing the diversity of astronomy faculty at colleges and universities.
- Learn about psychology research that sheds light on the "achievement gap" among minority college students.

CSMA Kicks Off in Washington (cont'd)

(Continued from page 1)

Special Session

The purpose of the special session was to enhance the visibility of, and participation in, the CSMA by informing the Society about the CSMA's mission, goals, and activities. The session was also meant as an opportunity to solicit ideas on relevant issues, effective methods and strategies for achieving the CSMA's mission, and effective methods and strategies for engaging the broader community of the AAS membership.

Keivan Stassun presented the CSMA's new website (www.astro.wisc.edu/csma) and newsletter (SPECTRUM) as resources that are available to all AAS members. Chick Woodward, CSMA chair, presented statistics on the representation of minorities in astronomy. He emphasized that for Blacks, Latinos, and Native Americans, the under-representation in astronomy as compared to the general population is an order-of-magnitude problem. Some of these statistics can be found in the January 2002 issue of SPECTRUM.

Following these presentations, an open discussion ensued among all those in attendance. Some of the issues raised included:

- the minority status of people of Asian descent, who are often perceived as overserved/overrepresented in the physical sciences and engineering.
- the competing demands between scholarship and service often experienced by young minority faculty; there is the imperative to "get tenure first", but if minorities say "no" to minority issues, who will say "yes"?
- the lack of active minority hiring and retention efforts (see article in January 2002 SPECTRUM for more about this issue).
- the importance of tapping the pool of minority undergraduates at historically minority-serving institutions.
- the critical role of K-12 education and outreach for informing minority youth about opportunities in science.
- the need to engage all astronomers—not just minorities—in minority issues: minori-

ties are often the only advocates for minority issues at their institutions.

Social Mixer

The CSMA hosted an evening "social mixer" for the purpose of informally bringing together AAS members interested in issues of equity and diversity. This was also an opportunity for members of the CSMA, CSWA, and GLBTQastro to get to know one another. Sponsored by *Astronomy Magazine*, the mixer was attended by approximately 50 people, including undergraduates, graduate students, postdocs, faculty, and members of the AAS Council.

Calling All Minorities

To enhance the visibility of minorities within the AAS, the CSMA has created an online directory of minority AAS members (www.astro.wisc.edu/csma). We encourage all minority AAS members to add their information to this directory, and we encourage other AAS members to use this directory (as well as the CSMA's minority speakers list) as a resource.

Current and previous issues of the SPECTRUM newsletter are available online at the CSMA website (www.astro.wisc.edu/csma). We encourage all AAS members to sign up using the online form to receive future issues of SPECTRUM by mail.

We would also like to hear from minority AAS members who are within one year of receiving (or having received) their Ph.D. We hope to begin highlighting recent minority Ph.D. recipients in the SPECTRUM newsletter. If you are a recent minority graduate (or know one), please send email to csma-info@astro.wisc.edu.

Contribute to SPECTRUM

All AAS members are welcome and encouraged to submit contributions to SPECTRUM. Appropriate submissions include opinion pieces, information about minority outreach efforts, discussions of personal experiences with minority-related issues, etc. We are also interested in learning about articles that have appeared in other publications that we may be able to re-print. Submissions should be directed to SPECTRUM editor, Keivan Stassun (keivan@astro.wisc.edu).

The Role of Minority Serving Institutions (cont'd)

(Continued from page 1)

As discussed in a study conducted by the Educational Testing Service, minorities attending Minority Serving Institutions generally graduate at higher rates than at majority-White institutions, find lower average tuitions, and are more likely to pursue post-baccalaureate degrees.

Minority students select these institutions for a variety of reasons, but among them may be the sense that these institutions provide an affirming, nurturing educational environment, one in which negative stereotypes about ability—or “stereotype

threat”, as described in the article by Claude Steele (p. 10)—are minimized.

An often-overlooked source of minority talent in higher education is the nation’s community (two-year) colleges, where roughly 50% of all minorities begin their post-secondary school careers. For many minority students, these schools represent important gateways to four-year institutions and, ultimately, to graduate-level education.

The CSMA is currently working with the AAS leadership to explore ways to build stronger connections between Minority Serving Institutions and institutions with Ph.D.-granting programs in astronomy.

SPECTRUM

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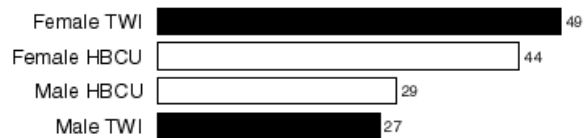
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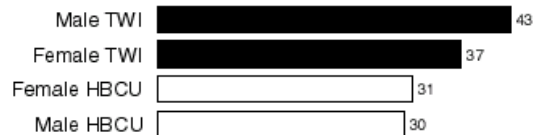
The SPECTRUM newsletter is distributed to AAS members at the January and June meetings and sent to home institutions of subscribers during the week of the meeting. Contributed articles are encouraged.

For more information on subscribing to SPECTRUM, submitting articles, or obtaining back issues, please visit the CSMA website:
<http://www.astro.wisc.edu/csma>

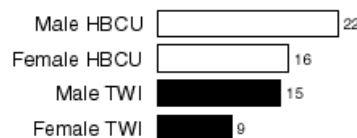
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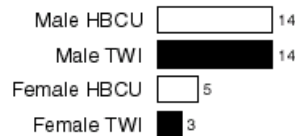
Social Sciences



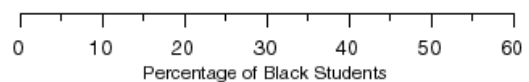
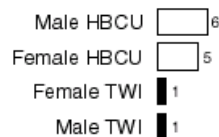
Academic Science



Engineering



Business



Comparison of degrees earned by Black college students at Historically Black Colleges and Universities (HBCU) versus those earned by Black students at Traditionally White Institutions (TWI). From data published in the Educational Testing Service policy information report “Students at Historically Black Colleges and Universities: Their Aspirations & Accomplishments” (October 1997).

Historically Black Colleges and Universities (HBCUs): Key Production Sites for Black Physicists, Astronomers

by Ronald Roach — reprinted from *Black Issues in Higher Education*, originally published as “A Focus on Physics”

James Davenport takes a great deal of pride in having taught hundreds of students who have graduated from Virginia State University with bachelor's degrees in physics. Among graduates of the college physics program at VSU are luminaries such as Demetrius Venable, the current chair of Howard University's Ph.D.-granting physics program. Davenport, a veteran scientist who taught Venable and many others, sees his stewardship of VSU's physics program as a continuation of the legacy established by early 20th century Black physicists at historically Black schools.

“The most talented Black physicists built careers at schools such as Virginia State, Howard and Fisk because they faced discrimination at other institutions,” he says.

These days, Davenport, who is chair of the VSU physics department, worries that too few young Blacks, regardless of whether they attend historically Black schools or majority White institutions, are choosing physics as an undergraduate

Institution	3-Year Avg.
Xavier U (La.)	15
Southern U & A&M Coll (La.)	10
Lincoln U (Pa.)	9
Alabama A&M U (Ala.)	5
Benedict Coll (S.C.)	4
Chicago St (Ill.)	4
Howard U (D.C.)	4
Jackson St U (Miss.)	4
Norfolk St U (Va.)	4
Tennessee St (Tenn.)	4

The top ten producers of African-Americans with Bachelor's degrees in physics, 1996-1998. Shown is the three-year average number of African-American students graduating with Bachelor's degrees in physics. All ten institutions listed are Historically Black Colleges and Universities. From data published in the AIP's “Enrollments and Degrees Report”, August 2001, page 7.

major and a career option with the acquisition of a Ph.D.

Historically, the lack of exposure among Black students to rigorous college prep science and mathematics courses in junior and senior high school has long limited the participation of Blacks potentially able to

succeed in the discipline. In more recent years, the recruitment efforts by engineering and health science coalitions have contributed to a highly competitive environment for attracting academically prepared Blacks into undergraduate and graduate physics programs, according to observers.

Nationally, the U.S. Department of Education reports that Blacks obtaining degrees in physics in 1997 were represented as follows: associate's degrees, 11.1 percent; bachelor's, 5.1 percent; master's, 4.7 percent; and doctorates, 1.9 percent.

Although a number of African American physicists acknowledge the profession has to do a better job at making Black students aware of opportunities in physics before they get to college, there also exists strong opinions that low Black student enrollment numbers represent the larger reality of a declining interest in physics by American students in general. Some critics of American public education, including Black physicists, decry the lack of quality of K-12 science education in the United States and blame the national scientific leadership for not pushing hard enough for reforms that would improve overall math and science education at the K-12 level and increase undergraduate and graduate school opportunities for U.S. students.

“There has to be more support for American-born students in the sciences,” says Dr. Keith H. Jackson, a physicist at the Lawrence Berkeley National Laboratory in California and a former Howard University professor.

HBCUs — Playing a key role

After years of coming under the threat of elimination because of low student numbers, the Virginia State University physics program currently appears safe from danger even though enrollment has stabilized at its lowest levels since the 1970s, according to VSU's Davenport. Over the past two decades, the state of Virginia has questioned whether Virginia State's program is justified given that it has enrolled far fewer students in physics than other state schools in Virginia.

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HBCUs: Key Production Sites for Black Physicists, Astronomers (cont'd)

(Continued from page 4)

Davenport says total enrollment hit a peak in the 1970s and 1980s at roughly 30 students. In recent years, the program has fallen to 12 to 15 majors at a given time, he notes.

Davenport explains that state officials have declined to close the VSU physics department because he has consistently shown that it is responsible for graduating more than 90 percent of Black students in physics among Virginia's public colleges and universities.

"That's far more than all the other Virginia campuses combined," he says.

Because of the small size of its program, VSU is able to offer its students a considerable amount of attention, Davenport adds. That means the program is able to bring students lacking in math and science proficiency up to high levels of achievement, according to Davenport. He notes that the program has enrolled and graduated students who, prior to college, had never taken a physics course.

"We have a very strong mentoring program. We can give our students special attention because of our small numbers," Davenport says.

Typically, most HBCU programs are considered small by large research institution standards. Faculty at several HBCUs report that they have managed to secure significant research support with federal agencies and energy laboratories. For students, that means physics research becomes a critical part of their educational experience.

"Undergraduates who come here are getting experiences comparable to what first- and second-year graduate students get," Davenport says.

It is estimated that 40 percent of Blacks who earn doctorates in physics are graduates of historically Black undergraduate programs.

"The HBCUs are very productive," says Dr. Kennedy Reed, a theoretical physicist at the Lawrence Livermore National Laboratory in California and the coordinator of an HBCU and minority-serving outreach program.

Howard's Venable says physics programs at HBCUs have a rich tradition that began with con-

scientious and pioneering Black scientists. He notes that the physics Ph.D. program was the second doctorate program established at Howard, which began in 1962. Howard offered a doctorate in chemistry before the program got underway in physics.

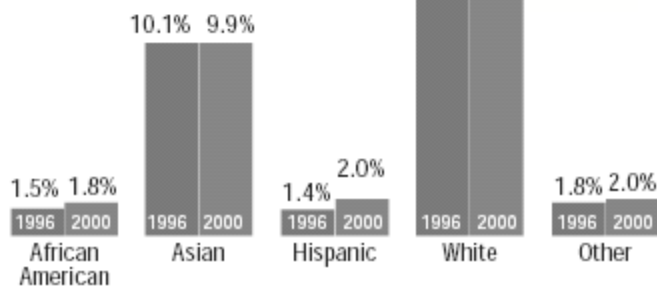
Currently, four HBCUs have Ph.D. programs in physics. They are Howard, Hampton University, Florida A&M University and Alabama A&M University.

A Winning Collaboration?

Given the role that prominent Black scientists played in establishing physics programs at historically Black institutions, it's not surprising that today's associations of Black physicists and physics students

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Five-Year Trend
Race and Ethnicity Percentage of Physics Faculty



Data source: AIP "Physics Academic Workforce Report", 2000.

An Introduction to Tribal Colleges and Universities

Adapted from "What Are Tribal Colleges?" by The American Indian Higher Education Consortium

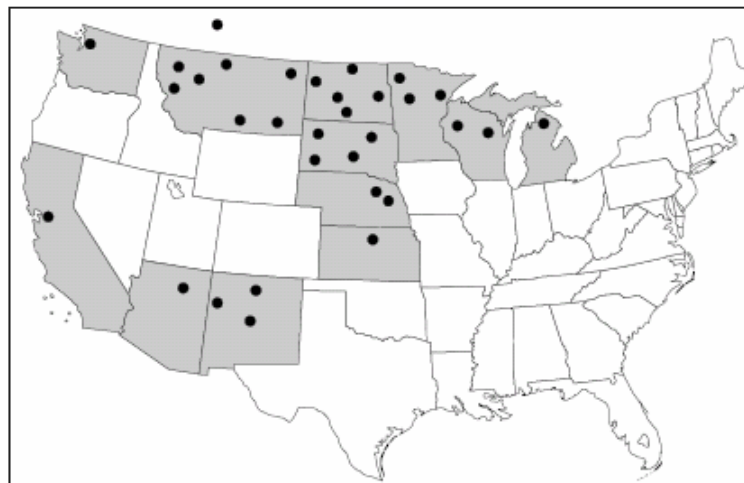
Tribal Colleges were created over the last 30 years in response to the higher education needs of American Indians, and generally serve geographically isolated populations that have no other means of accessing education beyond the high school level. They have become increasingly essential to educational opportunity for American Indian students. Tribal Colleges are unique institutions that combine personal attention with cultural relevance, in such a way as to encourage American Indians—especially those living on reservations—to overcome the barriers in higher education.

The history of American Indian higher education over the last several hundred years is one of compulsory Western methods of learning, recurring attempts to eradicate tribal culture, and high drop-out rates by American Indian students at mainstream institutions. In reaction to this history, American Indian leaders built on the success of the "self-determination" movement of the 1960s to rethink tribal higher education. These leaders recognized the growing importance of post-secondary education, and became convinced that it could strengthen reservations and tribal culture without assimilation. In 1968 the Navajo Nation created the first tribally controlled college—now called Diné College—and other Tribal Colleges quickly followed in California, and North and South Dakota.

Today, there are 28 tribally chartered colleges and three federally chartered Indian colleges in a total of 12 states. The tribally controlled institutions were chartered by one or more tribes and are locally managed, while the federally chartered institutions are governed by national boards. Collectively called "Tribal Colleges," these institutions are in varying stages of development, and differ in their structures, sizes, and other characteristics. Nevertheless, they share some basic commonalities:

- most are less than 25 years old;
- most have relatively small student bodies that are predominantly American Indian;
- most are located on remote reservations, with limited access to other colleges;
- most were chartered by one or more tribes, but maintain their distance from tribal governments;
- all have open admissions policies; and
- all began as two-year institutions.

In addition, all Tribal Colleges are fully accredited by regional accrediting agencies, with the exception of three colleges that are candidates for accreditation. All of the colleges offer associate's degrees and virtually all offer certificates or degrees for programs of less than two years. Four colleges offer bachelor's degrees and two offer master's degrees. In many ways, Tribal Colleges are similar to mainstream community colleges. However, the trait that distinguishes them from other community colleges is their dual mission: 1) to rebuild, reinforce and explore traditional tribal cultures, using uniquely designed curricula and institutional settings; and at the same time 2) to address Western models of learning by providing traditional disciplinary courses that are transferrable to four-year institutions. Another important asset of Tribal Colleges is their ability to provide personalized attention to their students, in order to overcome the economic and social barriers to postsecondary success they face. Tribal Colleges are committed to fostering a family-like atmosphere and strong personal relationships between students and faculty.



Geographic location of Tribal Colleges. Source: AIHEC.

Congress has recently designated Tribal Colleges as land-grant institutions, in recognition of the essential ties between the colleges, tribal lands, and local economic development.

For more information, visit the AIHEC website, or email AIHEC, at: www.aihec.org or aihec@aihec.org.

Astronomy Outreach to White Earth Native Americans at the University of Minnesota

by April Homich, Graduate student, University of Minnesota

To increase the diversity of minorities in astronomy, as well as other physical sciences, we need to reach the youth of these populations and instill the sense of confidence needed to succeed in these fields. We have begun this process at the White Earth Reservation in northern Minnesota, which has approximately 4,500 members of Anishinabe (Ojibwe) descent living on the reservation. The NASA-funded “Reach for the Sky” program, run by the University of Minnesota 4-H Youth Development organization, was designed to encourage girls and minority students to learn about science using hands-on activities.

Before the program was introduced, the dropout rates for Native Americans in public schools serving the White Earth reservation ranged from 12% to 88%, compared with the rates of 1.2% to 16.5% for all students at those schools. Statistics such as these are commonplace throughout the country, resulting in the highest dropout rate and lowest college enrollment of any minority group. Less than half of the adults on the reservation are employed.

The attendees of the Circle of Life School are 100% Native American and over half of the students are female. Being 29 miles from the nearest town, its location can make travel difficult and poverty is a pervasive force in the students’ lives. Some of the students originally attended other schools on the reservation, but were expelled due to poor attendance. The school is working diligently



Launch time at the White Earth reservation with the 4th grade class. Photo courtesy of the author.

at raising graduation rates, (currently at less than 50% with fewer than 10% of the graduates continuing on to higher education) and is willing to take a new approach to teaching.

Hands-on activities are endorsed by teachers in the school and give the students feelings of success at completion. Because the “Reach for the Sky” program targets minority youth and girls, the partnership seemed obvious: also, a relationship had already been established between the University and the reservation. In 1999, White Earth elders asked the University of Minnesota to help their students succeed in school by partnering with them in a three-year summer-school program that resulted in increased math and science scores on the California Achievement Test and improved attendance. Expansion of the program into the 2000-2001 school year was enabled through a NASA Ideas grant.

During the first school year, “Reach for the Sky” focused on aerospace activities. Among them were creating a community rocket club and web site, and monthly visits by myself and fellow graduate student Josh Nollenberg to direct the activities and to act as role models in science. The target audience was the high school, though we did involve some of the younger classes. The goals of our visits were to interest girls and minority groups in science, dispel myths about who scientists are and what they do, and find culturally effective teaching methods. A major part of our project was to attempt to incorporate elements of Anishi-



April Homich is currently pursuing a Masters degree in astronomy at the University of Minnesota.



Josh Nollenberg is pursuing a Ph.D. in astronomy at the University of Minnesota, and is a member of the Gay, Lesbian, Bisexual, Transgender, Queer astronomers (GLBTQastro) group.

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HBCUs: Key Production Sites for Black Physicists, Astronomers (cont'd)

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exert some influence over the development of opportunities for African Americans, both students and faculty members, who are affiliated with programs at either HBCUs or majority White institutions.

Black officials, in particular, have been aggressive in pushing for strong ties between minority-serving institutions and federal agencies and laboratories. As a result, minority-serving institutions have benefited considerably from their alliances with agencies, such as NASA, and the national energy laboratories. In places lacking the infrastructure to allow large-scale experiments, national energy laboratories have filled a gap especially for HBCU researchers and students needing access to expensive high-tech facilities.

Lawrence Livermore's Reed, a former president of the National Society of Black Physicists, directs the Research Collaborations Program for Historically Black Colleges and Universities and Other Minority Institutions at the laboratory. The five-year old program "develops and promotes productive and mutually beneficial scientific collaborations between the LLNL and the nation's HBCUs and MIs," according to program literature.

"I've been interested in the matter of minority underrepresentation (in physics) for quite some time," says Reed, who launched the program in hopes of improving the scientific production of HBCUs and minority-serving institutions.

A former professor at Atlanta's Morehouse College where he taught physics in the late 1970s, Reed joined the LLNL as a staff physicist in 1981. After noting that linkages between HBCUs and the national laboratories were often limited to student and faculty summer internships, Reed sought to develop stronger relationships between the schools and the laboratory.

"I got this program going because I wanted to have a situation where there was a link that was not limited to someone coming for the summer, but based on a professor at an HBCU having an ongoing collaboration with a national laboratory researcher. The real linchpin is the science — be-

tween scientists here at the national laboratory and the scientists at the HBCU (and minority-serving) campuses," Reed says.

The program, which has 14 ongoing collaborations, also serves to help improve undergraduate minority student retention and long-term success in physics by getting students involved in national lab research that is connected to their teachers.

Reed belongs to a class of senior Black scientists who have been able to bring minority institutions and individuals into the mainstream of physics research. Physicists, such as Morehouse College president Dr. Walter Massey and Rensselaer Polytechnic Institute president Dr. Shirley Ann Jackson, have also been recognized for bringing about attention to diversity in the physics field.

The Agenda of Black Physicists

Associations such as the National Society of Black Physicists (NSBP) and the National Conference of Black Physics Students (NCBPS) have actively pushed for Black representation in academic faculties, degree programs, and research employment and funding. Founded in 1977, the NSBP first elected officers including Massey, who was then dean of the faculty and professor of physics at Brown, and VSU's Davenport as co-chairs.

Jackson, president-elect of the NSBP, says it's highly critical for the organization to focus on increasing the numbers of Black faculty at predominantly White institutions. Recently, Jackson has gotten involved with lobbying Stanford University to hire a Black physics professor. Stanford, which has enjoyed notable recognition for graduating Black doctorates in physics, unexpectedly lost Dr. Arthur Walker, previously the only Black on the physics faculty. Walker, who mentored numerous Black graduate students during his career, passed away this past April just a month after chairing a joint conference of the NSBP and NCBPS that was held at Stanford.

Jackson, who holds highly critical views of the national scientific establishment, wants to see federal agencies adopt policies to provide greater support directly to undergraduates and graduates for

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HBCUs: Key Production Sites for Black Physicists, Astronomers (cont'd)

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math and science education. He believes that U.S. federal policy supports foreign national students in the United States at the expense of native-born American students.

“We should do what the English, the Germans, the Italians and the French do, and that is to fully fund the education of undergraduates in mathematics and science,” Jackson says.

The federal government should also fund American graduate students with direct support rather than making them dependent on aligning

with faculty who have research grants, he urges.

A different set of policies, Jackson believes, would result in greater African American participation in physics. “There is an opportunity for us to do better, but if we don’t have the right combination of policies, I can’t be optimistic (about African Americans in the physics field),” Jackson says.

Reprinted with permission from the September 13, 2001, issue of Black Issues in Higher Education magazine. Ronald Roach is a Black Issues in Higher Education staff writer.

Outreach to White Earth Native Americans (cont'd)

(Continued from page 7)

nabe culture into science, such as discussing the use of stars as navigation tools, and involving elders.

During one visit, I was in contact via the Internet from the 1.5-m telescope at Mount Lemmon, Arizona, while on an observing run. Josh gave them an introduction to astronomy at Circle of Life and they were able to communicate with me through an interactive video conferencing session. Other activities included the Toys in Space curriculum and a meeting with John Herrington, the first Native American astronaut.

Participants in the program were interviewed in May 2001 to determine its effectiveness. Overall, the response was very positive, with increased enthusiasm for science. Students who began the session with a negative attitude about the projects were very involved by the end of the day, often staying late to finish. There were indications of a greater understanding of the physics involved in building rockets. Teachers in other classrooms liked the program also, often allowing their students to come to our sessions. Parents noted that their sons and daughters were proud of themselves, and in some cases researched the subjects at home. Many students expressed interest in higher education, particularly in science. Other comments included an increased interest in school, increased leadership and self-esteem.

Our presence on the reservation was a great

learning experience for us. It taught us the failure of traditional teaching methods within this group. The school environment at Circle of Life is not highly structured: the teachers are very flexible and the students respond well to the open environment. During our time there, lecture became a support for hands-on learning. This allowed the students to gain insight into the physical processes involved and see the relevance of the physics they were learning. In the short term, effects were very positive. Following the students’ progress over a longer time span should give us a better idea of the effectiveness of these teaching methods. We hope that the interests fostered during Reach for the Sky will remain with them as they pursue their dreams.



Students look on in amazement during a live video connection to an observing run at Mount Lemmon, AZ. Photo courtesy of the author.

Thin Ice: “Stereotype Threat” and Black College Students

by Claude Steele — reprinted from *The Atlantic Monthly* magazine

When capable Black college students fail to perform as well as their White counterparts, the explanation often has less to do with preparation or ability than with the threat of stereotypes about their capacity to succeed. Educators at Stanford who tested this hypothesis report their findings and propose solutions.

The buildings had hardly changed in the thirty years since I'd been there. “There” was a small liberal-arts school quite near the college that I attended. In my student days I had visited it many times to see friends. This time I was there to give a speech about how racial and gender stereotypes, floating and abstract though they might seem, can affect concrete things like grades, test scores, and academic identity. My talk was received warmly, and the next morning I met with a small group of African-American students. I have done this on many campuses. But this time, perhaps cued by the familiarity of the place, I had an experience of *déjà vu*. The students expressed a litany of complaints that could have come straight from the mouths of the black friends I had visited there thirty years earlier: the curriculum was too white, they heard too little black music, they were ignored in class, and too often they felt slighted by faculty members and other students. Despite the school's recruitment efforts, they were a small minority. The core of their social life was their own group. To relieve the dysphoria, they went home a lot on weekends.

I found myself giving them the same advice my father gave me when I was in college: lighten up on the politics, get the best education you can, and move on. But then I surprised myself by saying, “To do this you have to learn from people who part of yourself tells you are difficult to trust.”

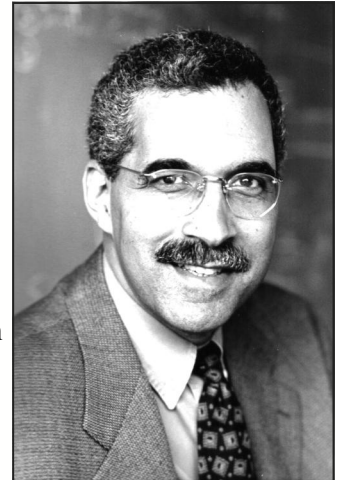
Over the past four decades African-American college students have been more in the spotlight than any other American students. This is because they aren't just college students; they are a cutting edge in America's effort to integrate itself in the thirty-five years since the passage of the Civil Rights Act. These students have borne much of the burden for our national experiment in racial inte-

gration. And to a significant degree the success of the experiment will be determined by their success.

Nonetheless, throughout the 1990s the national college-dropout rate for African-Americans has been 20 to 25 percent higher than that for whites. Among those who finish college, the grade-point average of black students is two thirds of a grade below that of whites.

A recent study by William Bowen and Derek Bok, reported in their book *The Shape of the River*, brings some happy news: despite this underachievement in college, black students who attend the most selective schools in the country go on to do just as well in postgraduate programs and professional attainment as other students from those schools. This is a telling fact in support of affirmative action, since only these schools use affirmative action in admissions. Still, the underperformance of black undergraduates is an unsettling problem, one that may alter or hamper career development, especially among blacks not attending the most selective schools.

Attempts to explain the problem can sound like a debate about whether America is a good society, at least by the standard of racial fairness, and maybe even about whether racial integration is possible. It is an uncomfortably finger-pointing debate. Does the problem stem from something about black students themselves, such as poor motivation, a distracting peer culture, lack of family values, or—the unsettling suggestion of “The Bell Curve”—genes? Or does it stem from the conditions of blacks' lives: social and economic deprivation, a society that views blacks through the lens of diminishing stereotypes and low expectations, too much



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coddling, or too much neglect?

In recent years this debate has acquired a finer focus: the fate of middle-class black students. Americans have come to view the disadvantages associated with being black as disadvantages primarily of social and economic resources and opportunity. This assumption is often taken to imply that if you are black and come from a socioeconomically middle-class home, you no longer suffer a significant disadvantage of race. “Why should the son of a black physician be given an advantage in college admission over the son of a white delivery-truck driver?” This is a standard question in the controversy over affirmative action. And the assumption behind it is that surely in today’s society the disadvantages of race are overcome when lower socioeconomic status is overcome.

But virtually all aspects of underperformance—lower standardized-test scores, lower college grades, lower graduation rates—persist among students from the African-American middle class. This situation forces on us an uncomfortable recognition: that beyond class, something racial is depressing the academic performance of these students.

Some time ago I and two colleagues, Joshua Aronson and Steven Spencer, tried to see the world



from the standpoint of these students, concerning ourselves less with features of theirs that might explain their troubles than with features of the world they see. A story I was told recently depicts some of these. The storyteller was worried about his

mally energetic black student who had broken up with his longtime girlfriend and had since learned that she, a Hispanic, was now dating a white student. This hit him hard. Not long after hearing about his girlfriend, he sat through an hour’s discussion of “The Bell Curve” in his psychology class, during which the possible genetic inferiority of his race was openly considered. Then he overheard students at lunch arguing that affirmative action allowed in too many underqualified blacks. By his own account, this young man had experienced very little of what he thought of as racial discrimination on campus. Still, these were features of his world. Could they have a bearing on his academic life?

My colleagues and I have called such features “stereotype threat”—the threat of being viewed through the lens of a negative stereotype, or the fear of doing something that would inadvertently confirm that stereotype. Everyone experiences stereotype threat. We are all members of some group about which negative stereotypes exist, from white males and Methodists to women and the elderly. And in a situation where one of those stereotypes applies—a man talking to women about pay equity, for example, or an aging faculty member trying to remember a number sequence in the middle of a lecture—we know that we may be judged negatively by it.

Like the young man in the story, we can feel mistrustful and apprehensive in such situations. For him, as for African-American students generally, negative stereotypes apply in many situations, even personal ones. Why was that old roommate unfriendly to him? Did that young white woman who has been so nice to him in class not return his phone call because she’s afraid he’ll ask her for a date? Is it because of his race or something else about him? He cannot know the answers, but neither can his rational self fully dismiss the questions. Together they raise a deeper question: Will his race be a boundary to his experience, to his emotions, to his relationships?

With time he may weary of the extra vigilance these situations require and of what the psychologists Jennifer Crocker and Brenda Major have called the “attributional ambiguity” of being on the receiving end of negative stereotypes. To reduce this stress he may learn to care less about the situa-

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Keeping Our Faculties: Addressing the Recruitment and Retention of Faculty of Color in Higher Education

by *Caroline Sotello Viernes Turner*

The recruitment and retention of faculty of color remains one of the most difficult challenges facing American higher education. Research findings—whether qualitative or quantitative, whether numerical or narrative—demonstrate that American Indian, African American, Latino, and Asian Pacific American faculty comprise, at most, 10% of the faculty, and many describe experiences of racial and ethnic bias in the workplace. Research findings suggest that there is a need to focus on changing the higher education workplace environment to further embrace the value of a racial and ethnically diverse professoriate in order to sustain the viability, vitality, and growth of our institutions in an ever-changing social environment.

Despite present legal challenges, which must be considered in addressing problems within the workplace environment, a proactive stance toward solutions and strategies is crucial. On October 18-20, 1998, over 300 faculty, administrators, and students from 36 states participated in a national symposium entitled “Keeping Our Faculties: Addressing the Recruitment and Retention of Faculty of Color in Higher Education.” The symposium was sponsored by the University of Minnesota and the Minnesota State Colleges and Universities.

The Keeping Our Faculties Symposium provided an arena for stimulating dialogue among scholars, practitioners, and policy makers aimed at generating useful strategies for increasing faculty diversity on college and university campuses. This executive summary distills information from the presentations of several symposium speakers with particular focus on their recommendations. Ideas emerged from the scholarly work and practical experience of the 15 plenary speakers and from the 28 concurrent session presenters. Not only are presenter remarks on barriers and strategies highlighted in this document, but results from symposium attendees participating in small group discussion tables and in an interactive keypad technology session will be presented. More information on the symposium is available in the symposium proceedings.

SYMPOSIUM GOALS

1. Address issues of recruitment, retention, and development of ethnic/racial minority faculty
2. Develop creative and workable strategies for addressing these issues.
3. Share implementable solutions based on research and practical experience.



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SYMPOSIUM FINDINGS

A. BARRIERS

Recognizing and Getting Beyond the Myths

Many symposium participants stressed that one of the most prevalent barriers to progress toward a representative faculty was recognizing and getting beyond myths. Myths act as barriers to progress in hiring and promoting faculty of color. As we learn more about these misperceptions, informing others is one of our important tasks. Continuing to unveil such myths is another way to facilitate the hiring and promotion of faculty of color. Examples of studies presented at the symposium which unveil labor market myths, model minority, and other myths are briefly described here.

1) Labor Market Myths

This body of myths include: institutions cannot compete for doctorates of color who are sought after and offered high salaries; there are no qualified candidates for our faculty position; faculty of color would not want to come to our campus; faculty of color will leave for more money and prestige; recruiting faculty of color takes away opportunities for potential white faculty.

In *Achieving Faculty Diversity: Debunking the Myths* (1996), Daryl Smith examines the labor mar-

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ket experience of scholars funded by the Ford, Mellon, and Spencer Foundations. She and her colleagues found that only 11% of the scholars of color within the sample of approximately 300 recipients interviewed were “sought after” by institutions of higher education. Other findings emerging from this study include: 1) scientists of color were found in post-doctoral positions and were not being pursued for faculty positions; 2) scholars wanted to work in a wide range of institutional types, although the myth is that they only want to work at prestigious institutions; 3) when faculty of color moved, reasons often focused on unresolved issues with the institution rather than monetary incentives; 4) choices to leave academe were as often a function of the problems with academe as irresistible temptations outside of academe; 5) European-American scholars who were in this study were highly successful in finding faculty positions, dispelling the myth that campuses were only recruiting faculty of color [Editor’s note: Smith’s article can be found in the January 2002 issue of *SPECTRUM*].

In his presentation, Samuel L. Myers, Jr. points out the myth of the revolving door. His study, conducted in the Midwest, suggests that minority faculty may leave their institutions at similar rates when compared to white faculty. The problem is that they are not being hired at the same rate as white faculty.

2) The “Model Minority” Myth

Shirley Hune and Kenyon Chan (1997) point to a myriad of myths surrounding the “success” of the Asian Pacific American (APA) in academe. They point out that lumping Asian Pacific Americans under one category tends to mask inequities experienced by many in this community. They find low tenure rates, a concentration in non-tenure track positions, and low numbers of Asian Pacific Americans in administration. They report that APA faculty salaries are “generally lower than those of their white counterparts, even when rank and college affiliation are taken into consideration.” They also remind us to look at the gender gap for faculty of

color by noting that APA women are primarily in the junior faculty ranks while men are primarily in the senior faculty ranks.

3) The “Diversity is Only for Minorities” Myth *Everyone Benefits*

Jonathan Alger (1998) and others stressed that diversity is not a minority issue, but an issue that should be of concern to everybody and everyone can benefit from it. For example, Alger stresses that exposure to similarities across racial lines, and differences within racial groups, can overcome learned stereotypes and prejudices.

Corporate Needs and Institutional Viability

In her presentation, Mildred Garcia points to the importance of meeting corporate needs as another rationale to support racial and ethnic diversity in higher education. She states that major companies in the corporate world have discovered that diversity is vital to their existence. If the higher education enterprise is to continue to contribute to the world of work, diversity then is an important component. In fact, as discussed by Daryl Smith, the viability of higher education may depend on its ability to meet such needs in the twenty-first century.

“... lumping Asian Pacific Americans under one category tends to mask inequities experienced by many in this community.”

4) The “Level Playing Field” Myth

Countless studies document the added pressures placed on a faculty member of color in a predominantly white environment. Several presenters addressed the high expectations of faculty of color to address minority concerns for their institutions and the stresses of being an “only” on a faculty. Francis Rains, Gloria Cuadraz, Wayne Stein, and Melanie Peterson-Hickey address issues such as biased student evaluations, differential role expectations, and the impact of value conflicts for faculty of color. Sheila Ards examines the effect of race on the tenure and promotion rates for African American faculty.

B. STRATEGIES

In addition to dispelling myths such as those described above, several strategies to address the

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Addressing the Recruitment and Retention of Faculty of Color in Higher Education (cont'd)

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recruitment and retention of faculty of color were suggested by symposium presenters. As one symposium participant notes: "A lot of time is spent on racial and ethnic bias. That's an institutional problem." Present interventions or strategies to address the underrepresentation of faculty of color appear to emphasize the molding of people of color to fit the institution. While such strategies as faculty development workshops as well as fellowship programs at the doctoral and post doctoral level must not be abandoned, symposium presenters also emphasized strategies for institutional change. Strategies will be briefly highlighted here.

1) Incorporate Diversity as A Core Value and The Importance of Commitment From All Levels

Recruitment and retention of faculty of color must be implemented as a core value of the institution, not something at the margins. Commitment from all levels of institutional administration and faculty governance is crucial in leading this effort.

Josephine D. Davis and Mildred Garcia underscore this as foundational to successful efforts toward faculty diversity.

2) Broadening Definitions of Scholarship/ Restructuring the Faculty Reward System

Ernest Boyer (1990) in *Scholarship Reconsidered* described ways in which scholarly work must be expanded to meet the educational needs of the twenty-first century. Studies by Anthony Antonio indicate that faculty of color are at the forefront of broadening the conception of scholarship as defined by Boyer. Further studies examining the contributions of faculty of color to their research, teaching, and service roles in higher education are needed.

In his presentation, Bill Tierney states that the higher education enterprise must "ensure that the multifaceted tasks that occur in an organization are equally honored and recognized. Society needs fac-

ulty to undertake a multitude of tasks, rather than merely emphasizing one to the exclusion of others." Thus, the academy is encouraged to explore ways of redefining merit by devising broader definitions of scholarship and service as rewarded in promotion, tenure, and recruitment.

3) Support for Administrative and Senior Faculty Development

Inform college deans, department chairs, and others in high level policy and decision making positions about the need and value of a diverse professoriate. Dispel myths and develop systematic ways to address inequities in the hiring and promotion of faculty of color.

4) Initiate Processes and Practices that Support Community and Inclusion

Several symposium presenters emphasized the need to build systematic, comprehensive faculty development programs, and to develop and initiate networking opportunities for faculty of color. Presenters also underscored the critical value of mentoring for faculty of color to the success of college and univer-

sity efforts in addressing issues of retention, promotion and tenure.

5) Monitor Progress

Institutions need to assess the present status of diversity within the student body and professoriate before new strategies are initiated. It is important to monitor institutional progress and maintain records to document change over time. Robert Jones advocated surveying for "best practices" across colleges and disciplines, then using these successful units as benchmarks. Reinforcing the call for intervention, Jones further urged monitoring the progress of new faculty of color and having intervention plans in place if needed.

6) Institutional Accountability

Mildred Garcia states: "When a new faculty

"Recruitment and retention of faculty of color must be implemented as a core value of the institution, not something at the margins."

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member is denied tenure, not only does the faculty member fail, but the institution, the department chair, and senior faculty colleagues have also failed.”

7) Support Research

Institutional support of continued research, both quantitative and qualitative, on the experience of faculty of color in the workplace is also important to expand our knowledge of factors affecting not only the experience of faculty of color but also documenting the contributions which a diverse professoriate brings to the teaching, learning, research, and service context.

8) Building Alliances

Institutional actors must collaborate to develop and implement strategies toward the effective recruitment and retention of faculty of color. There is a need to work together and support one another while thinking hard about how to promote institutional climates that support a racially diverse faculty. There is an urgency to move from taking steps forward to taking the necessary giant leaps forward in meeting the goal of achieving representative faculties. Inter-institutional alliances with business can also support efforts to achieve a diverse professoriate.

“There is an urgency to... [take] the necessary giant leaps forward in meeting the goal of achieving representative faculties.”

9) Review Hiring Processes

Adopt fair and equal practices in faculty recruitment, such as search committees that are diverse in representation and informed of new scholarship, and all aspects of campus life to ensure faculty of color, their concerns, and issues are included and respected.

For more information, see the following references:

Light, P. (1994). Diversity in the faculty “not like us”: Moving barriers to minority recruitment. *Journal of Policy Analysis and Management*, 13 (1), 163-186.

Mickelson, R.A., & Oliver, M.L. (1991). Mak-

ing the short list: Black candidates and the faculty recruitment process. In P.G. Altbach, & K. Lomotey, (Eds.), *The racial crisis in American higher education* (pp. 149-166). Albany, NY: SUNY Press.

10) Use the Legal Theory of Diversity

Jonathan Alger, AAUP general counsel, notes that institutions must, along with consultation with their legal counsel, “demonstrate that there is not a disconnect between legal standards and what you are doing on your campus.” He further states that “as a Supreme Court decision, the 1978 Bakke case is still the law of the land.” Race can be considered as one among a number of other factors that contributes to diversity, and diversity is a compelling interest in higher education. Diversity contributes to the robust exchange of ideas on campus. Alger concludes that an institution knows how best to educate its students, so institutions have the academic freedom to select their student body and faculty.

C. SYMPOSIUM FINDINGS—AUDIENCE PARTICIPATION

During the second day of the symposium, participants were asked to take part in small group discussion tables. Each table was asked to talk about strategies for addressing the issues of recruitment and retention of faculty of color that you would like to implement at your institutions. A group recorder made a list of strategies discussed. Among these suggestions were the following:

- 1) For technical colleges, create exchange programs with business so that faculty can be placed for six months in businesses where minorities are employed and minority business professionals can be invited to work in the classrooms.
- 2) Replicate “grow your own models” where doctoral students can be groomed from program completion to placement as a tenure track faculty.
- 3) Facilitate constructive conversations within academic departments concerning myths about and concerns of faculty of color.

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Thin Ice: “Stereotype Threat” and Black College Students (cont’d)

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tions and activities that bring it about—to realign his self-regard so that it no longer depends on how he does in the situation. We have called this psychic adjustment “disidentification.” Pain is lessened by ceasing to identify with the part of life in which the pain occurs. This withdrawal of psychic investment may be supported by other members of the stereotype-threatened group—even to the point of its becoming a group norm. But not caring can mean not being motivated. And this can have real costs. When stereotype threat affects school life, disidentification is a high price to pay for psychic comfort. Still, it is a price that groups contending with powerful negative stereotypes about their abilities—women in advanced math, African-Americans in all academic areas—may too often pay.

Measuring Stereotype Threat

CAN stereotype threat be shown to affect academic performance? And if so, who would be most affected—stronger or weaker students? Which has a greater influence on academic success among black college students—the degree of threat or the level of preparation with which they enter college? Can the college experience be redesigned to lessen the threat? And if so, would that redesign help these students to succeed academically?

As we confronted these questions in the course of our research, we came in for some surprises. We began with what we took to be the hardest question: Could something as abstract as stereotype threat



really affect something as irrepressible as intelligence? Ours is an individualistic culture; forward movement is seen to come from within. Against this cultural faith one needs evidence to argue that something as “sociological” as stereotype threat can repress something as

“individualistic” as intelligence.

To acquire such evidence, Joshua Aronson and I (following a procedure developed with Steven Spencer) designed an experiment to test whether the stereotype threat that black students might experience when taking a difficult standardized test could depress their performance on the test to a statistically reliable degree. In this experiment we asked black and white Stanford students into our laboratory and gave them, one at a time, a thirty-minute verbal test made up of items from the advanced Graduate Record Examination in literature. Most of these students were sophomores, which meant that the test was particularly hard for them—precisely the feature, we reasoned, that would make this simple testing situation different for our black participants than for our white participants.

In matters of race we often assume that when a situation is objectively the same for different groups, that it is experienced in the same way by each group. This assumption might seem especially reasonable in the case of “standardized” cognitive tests. But for black students, difficulty with the test makes the negative stereotype relevant as an interpretation of their performance, and of them. They know that they are especially likely to be seen as having limited ability. Groups not stereotyped in this way don’t experience this extra intimidation. And it is a serious intimidation, implying as it does that they may not belong in walks of life where the tested abilities are important—walks of life in which they are heavily invested. Like many pressures, it may not be experienced in a fully conscious way, but it may still impair their best thinking.

This is exactly what Aronson and I found. When the difficult verbal test was presented as a test of ability, black students performed dramatically less well than white students, even though we had statistically matched the two groups in ability level. Something other than ability was involved; we believed it was stereotype threat.

But maybe the black students performed less well than the white students because they were less

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motivated, or because their skills were somehow less applicable to the advanced material of this test. We needed some way to determine if it was indeed stereotype threat that depressed the black students' scores. We reasoned that if stereotype threat had impaired their performance on the test, then reducing this threat would allow their performance to improve. We presented the same test as a laboratory task that was used to study how certain problems are generally solved. We stressed that the task did not measure a person's level of intellectual ability. A simple instruction, yes, but it profoundly changed the meaning of the situation. In one stroke "spotlight anxiety," as the psychologist William Cross once called it, was turned off—and the black students' performance on the test rose to match that of equally qualified whites.

Aronson and I decided that what we needed next was direct evidence of the subjective state we call stereotype threat. To seek this, we looked into whether simply sitting down to take a difficult test of ability was enough to make black students mindful of their race and stereotypes about it. This may seem unlikely. White students I have taught over the years have sometimes said that they have hardly any sense of even having a race. But blacks have many experiences with the majority "other group" that make their race salient to them.

We again brought black and white students in to take a difficult verbal test. But just before the test began, we gave them a long list of words, each of which had two letters missing. They were told to complete the words on this list as fast as they could. We knew from a preliminary survey that twelve of the eighty words we had selected could be completed in such a way as to relate to the stereotype about blacks' intellectual ability. The fragment "-- ce," for example, could become "race." If simply taking a difficult test of ability was enough to make black students mindful of stereotypes about their race, these students should complete more fragments with stereotype-related words. That is just what happened. When black students were told that the test would measure ability, they completed



the fragments with significantly more stereotype-related words than when they were told that it was not a measure of ability. Whites made few stereotype-related completions in either case.

What kind of worry is signaled by this race consciousness? To find out, we used another probe. We asked participants on the brink of the difficult test to tell us their preferences in sports and music. Some of these, such as basketball, jazz, and hip-hop, are associated with African-American imagery, whereas others, such as tennis, swimming, and classical music, are not. Something striking emerged: when black students expected to take a test of ability, they spurned things African-American, reporting less interest in, for instance, basketball, jazz, and hip-hop than whites did. When the test was presented as unrelated to ability, black students strongly preferred things African-American. They eschewed these things only when preferring them would encourage a stereotypic view of themselves. It was the spotlight that they were trying to avoid.

Stereotype Threat Versus Self-Fulfilling Prophecy

ANOTHER question arises: Do the effects of stereotype threat come entirely from the fear of being stereotyped, or do they come from something internal to black students—self-doubt, for example?

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Thin Ice: “Stereotype Threat” and Black College Students (cont’d)

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Beginning with George Herbert Mead’s idea of the “looking-glass self,” social psychology has assumed that one’s self-image derives in large part from how one is viewed by others—family, school, and the broader society. When those views are negative, people may internalize them, resulting in lower self-esteem—or self-hatred, as it has been called. This theory was first applied to the experience of Jews, by Sigmund Freud and Bruno Bettelheim, but it was also soon applied to the experience of African-Americans, by Gordon Allport, Frantz Fanon, Kenneth Clark, and others. According to the theory, black students internalize negative stereotypes as performance anxiety and low expectations for achievement, which they then fulfill. The “self-fulfilling prophecy” has become a commonplace about these students. Stereotype threat, however, is something different, something external: the situational threat of being negatively stereotyped. Which of these two processes, then, caused the results of our experiments?

Joshua Aronson, Michael Lustina, Kelli Keough, Joseph Brown, Catherine Good, and I devised a way to find out. Suppose we told white male students who were strong in math that a difficult math test they were about to take was one on which Asians generally did better than whites. White males should not have a sense of group inferiority about math, since no societal stereotype alleges such an inferiority. Yet this comment would put them under a form of stereotype threat: any faltering on the test could cause them to be seen negatively from the standpoint of the positive stereotype about Asians and math ability. If stereotype threat alone—in the absence of any internalized self-doubt—was capable of disrupting test performance, then white males taking the test after this comment should perform less well than white males taking the test without hearing the comment. That is just what happened. Stereotype threat impaired intellectual functioning in a group unlikely to have any sense of group inferiority.

In science, as in the rest of life, few things are definitive. But these results are pretty good evidence that stereotype threat’s impairment of stan-

dardized-test performance does not depend on cueing a pre-existing anxiety. Steven Spencer, Diane Quinn, and I have shown how stereotype threat depresses the performance of accomplished female math students on a difficult math test, and how that performance improves dramatically when the threat is lifted. Jean-Claude Croizet, working in France with a stereotype that links poor verbal skills with lower-class status, found analogous results: lower-class college students performed less well than upper-class college students under the threat of a stereotype-based judgment, but performed as well when the threat was removed.

Is everyone equally threatened and disrupted by a stereotype? One might expect, for example, that it would affect the weakest students most. But in all our research the most achievement-oriented students, who were also the most skilled, motivated, and confident, were the most impaired by stereotype threat. This fact had been under our noses all along—in our data and even in our theory. A person has to care about a domain in order to be disturbed by the prospect of being stereotyped in it. That is the whole idea of disidentification—protecting against stereotype threat by ceasing to care about the domain in which the stereotype applies. Our earlier experiments had selected black students who identified with verbal skills and women who identified with math. But when we tested participants who identified less with these domains, what had been under our noses hit us in the face. None of them showed any effect of stereotype threat whatsoever.

These weakly identified students did not perform well on the test: once they discovered its difficulty, they stopped trying very hard and got a low score. But their performance did not differ depending on whether they felt they were at risk of being judged stereotypically.



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Why Strong Students Are Stereotype-Threatened

THIS finding, I believe, tells us two important things. The first is that the poorer college performance of black students may have another source in addition to the one—lack of good preparation and, perhaps, of identification with school achievement—that is commonly understood. This additional source—the threat of being negatively stereotyped in the environment—has not been well understood. The distinction has important policy implications: different kinds of students may require different pedagogies of improvement.

The second thing is poignant: what exposes students to the pressure of stereotype threat is not weaker academic identity and skills but stronger academic identity and skills. They may have long seen themselves as good students—better than most. But led into the domain by their strengths, they pay an extra tax on their investment—vigilant worry that their future will be compromised by society's perception and treatment of their group.

This tax has a long tradition in the black community.

The Jackie Robinson story is a central narrative of black life, literature, and journalism. *Ebony* magazine has run a page for fifty years featuring people who have broken down one or another racial barrier. Surely the academic vanguard among black college students today knows this tradition—and knows, therefore, that the thing to do, as my father told me, is to buckle down, pay whatever tax is required, and disprove the damn stereotype.

That, however, seems to be precisely what these students are trying to do. In some of our experiments we administered the test of ability by computer, so that we could see how long participants spent looking at different parts of the test questions. Black students taking the test under stereotype threat seemed to be trying too hard rather than not hard enough. They reread the questions, reread the multiple choices, rechecked their

answers, more than when they were not under stereotype threat. The threat made them inefficient on a test that, like most standardized tests, is set up so that thinking long often means thinking wrong, especially on difficult items like the ones we used.

Philip Uri Treisman, an innovator in math workshops for minority students who is based at the University of Texas, saw something similar in his black calculus students at the University of California at Berkeley: they worked long hours alone but they worked inefficiently—for example, checking and rechecking their calculations against the correct answers at the back of the book, rather than focusing on the concepts involved. Of course, trying extra hard helps with some school tasks. But under stereotype threat this effort may be misdirected. Achievement at the frontier of one's skills may be furthered more by a relaxed, open concentration than by a strong desire to disprove a stereotype by not making mistakes.

“... what exposes students to the pressure of stereotype threat is not weaker academic identity and skills but stronger academic identity and skills.”

Sadly, the effort that accompanies stereotype threat exacts an additional price. Led by James Blascovich, of the University of California at Santa Barbara, we found that the blood pressure of black students performing a difficult cognitive task under stereotype threat was elevated compared with that of black stu-

dents not under stereotype threat or white students in either situation.

In the old song about the “steel-drivin’ man,” John Henry races the new steam-driven drill to see who can dig a hole faster. When the race is over, John Henry has prevailed by digging the deeper hole—only to drop dead. The social psychologist Sherman James uses the term “John Henryism” to describe a psychological syndrome that he found to be associated with hypertension in several samples of North Carolina blacks: holding too rigidly to the faith that discrimination and disadvantage can be overcome with hard work and persistence. Certainly this is the right attitude. But taken to extremes, it can backfire. A deterioration of performance under stereotype threat by the skilled, confident black students in our experiments may be rooted in John Henryism.

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Thin Ice: “Stereotype Threat” and Black College Students (cont’d)

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This last point can be disheartening. Our research, however, offers an interesting suggestion about what can be done to overcome stereotype threat and its detrimental effects. The success of black students may depend less on expectations and motivation—things that are thought to drive academic performance—than on trust that stereotypes about their group will not have a limiting effect in their school world.

How to Reduce Stereotype Threat

PUTTING this idea to the test, Joseph Brown and I asked, How can the usual detrimental effect of stereotype threat on the standardized-test performance of these students be reduced? By strengthening students’ expectations and confidence, or by strengthening their trust that they are not at risk of being judged on the basis of stereotypes? In the ensuing experiment we strengthened or weakened participants’ confidence in their verbal skills, by arranging for them to have either an impressive success or an impressive failure on a test of verbal skills, just before they took the same difficult verbal test we had used in our earlier research. When the second test was presented as a test of ability, the boosting or weakening of confidence in their verbal skills had no effect on performance: black participants performed less well than equally skilled white participants. What does this say about the common-sense idea that black students’ academic problems are rooted in lack of self-confidence?

What did raise the level of black students’ performance to that of equally qualified whites was reducing stereotype threat—in this case by explicitly presenting the test as racially fair. When this was done, blacks performed at the same high level as whites even if their self-confidence had been weakened by a prior failure.

These results suggest something that I think has not been made clear elsewhere: when strong black students sit down to take a difficult standardized

test, the extra apprehension they feel in comparison with whites is less about their own ability than it is about having to perform on a test and in a situation that may be primed to treat them stereotypically. We discovered the extent of this apprehension when we tried to develop procedures that would make our black participants see the test as “race-fair.” It wasn’t easy. African-Americans have endured so much bad press about test scores for so long that, in our experience, they are instinctively wary about the tests’ fairness. We were able to convince them that our test was race-fair only when we implied that the research generating the test had been done by blacks. When they felt trust, they per-

formed well regardless of whether we had weakened their self-confidence beforehand. And when they didn’t feel trust, no amount of bolstering of self-confidence helped.

Policies for helping black students rest in significant part on assumptions about their psychology. As noted, they are typically assumed to lack confidence, which spawns a policy of confidence-building.

This may be useful for students at the academic rearward of the group. But the psychology of the academic vanguard appears different—underperformance appears to be rooted less in self-doubt than in social mistrust.

Education policy relevant to non-Asian minorities might fruitfully shift its focus toward fostering racial trust in the schooling situation—at least among students who come to school with good skills and high expectations. But how should this be done? Without particulars this conclusion can fade into banality, suggesting, as Alan Ryan has wryly put it in *Liberal Anxieties and Liberal Education*, that these students “will hardly be able to work at all unless everyone else exercises the utmost sensitivity to [their] anxieties.” Sensitivity is nice, but it is an awful lot to expect, and even then, would it instill trust?

That is exactly what Geoffrey Cohen, Lee

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mistrust.”

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Ross, and I wondered as we took up the question of how a teacher or a mentor could give critical feedback across the “racial divide” and have that feedback be trusted. We reasoned that an answer to this question might yield insights about how to instill trust more broadly in the schooling environment. Cohen’s hunch was that niceness alone wouldn’t be enough. But the first question had to be whether there was in fact a racial divide between teachers and students, especially in the elite college environment in which we worked.

We set up a simple experiment. Cohen asked black and white Stanford students one at a time to write essays about their favorite teachers, for possible publication in a journal on teaching. They were asked to return several days later for feedback on their essays. Before each student left the first writing session, Cohen put a Polaroid snapshot of the student on top of his or her essay. His ostensible purpose was to publish the picture if the essay was published. His real purpose was to let the essay writers know that the evaluator of their writing would be aware of their race. When they returned days later, they were given constructive but critical feedback. We looked at whether different ways of giving this feedback engendered different degrees of trust in it.

We found that neither straight feedback nor feedback preceded by the “niceness” of a cushioning statement (“There were many good things about your essay”) was trusted by black students. They saw these criticisms as probably biased, and they were less motivated than white students to improve their essays. White students took the criticism at face value—even as an indication of interest in them. Black students, however, faced a different meaning: the “ambiguating” possibility that the criticism was motivated by negative stereotypes about their group as much as by the work itself. Herein lies the power of race to make one’s world insecure—quite apart from whatever actual discrimination one may experience.

“There is ... another explanation for why black students haven’t fared well on predominantly white campuses: they aren’t prepared for the competition.”

But this experiment also revealed a way to be critical across the racial divide: tell the students that you are using high standards (this signals that the criticism reflects standards rather than race), and that your reading of their essays leads you to believe that they can meet those standards (this signals that you do not view them stereotypically). This shouldn’t be faked. High standards, at least in a relative sense, should be an inherent part of teaching, and critical feedback should be given in the belief that the recipient can reach those standards. These things go without saying for many students. But they have to be made explicit for students under stereotype threat. The good news of this study is that when they are made explicit, the students trust and respond to criticism. Black students who got this kind of feedback saw it as unbiased and

were motivated to take their essays home and work on them even though this was not a class for credit. They were more motivated than any other group of students in the study—as if the combination of high standards and assurance was like water on parched land, a much needed but seldom received balm.

Reassessing the Test-Score Gap

THERE is, of course, another explanation for why black college students haven’t fared well on predominantly white campuses: they aren’t prepared for the competition. This has become an assumption of those who oppose affirmative action in college admissions. Racial preference, the argument goes, brings black students onto campuses where they simply aren’t prepared to compete.

The fact most often cited in support of the underpreparation explanation is the lower SAT scores of black students, which sometimes average 200 points below those of other students on the same campus. The test-score gap has become shorthand for black students’ achievement problems. But the gap must be assessed cautiously.

First, black students have better skills than the gap suggests. Most of the gap exists because the proportion of blacks with very high SAT scores is

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Thin Ice: “Stereotype Threat” and Black College Students (cont’d)

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smaller than the corresponding proportions of whites and Asians. Thus when each group’s scores are averaged, the black average will be lower than the white and Asian averages. This would be true even if the same admissions cut-off score were used for each group—even if, for example, affirmative action were eliminated entirely. Why a smaller proportion of blacks have very high scores is, of course, a complex question with multiple answers, involving, among other things, the effects of race on educational access and experience as well as the processes dwelt on in this article. The point, though, is that blacks’ test-score deficits are taken as a sign of underpreparation, whereas in fact virtually all black students on a given campus have tested skills within the same range as the tested skills of other students on the campus.

In any case, the skills and preparation measured by these tests also turn out not to be good determinants of college success. As the makers of the SAT themselves tell us, although this test is among the best of its kind, it measures only about 18 percent of the skills that influence first-year grades, and even less of what influences subsequent grades, graduation rates, and professional success.

Indulge a basketball analogy that my colleagues Jay Rosner and Lee Ross and I have developed. Suppose that you were obliged to select a basketball team on the basis of how many of ten free throws a player makes. You’d regret having to select players on the basis of a single criterion. You’d know that free-throw shooting involves only a few of the skills that go into basketball—and, worse, you’d know that you’d never pick a Shaquille O’Neal.

You’d also wonder how to interpret a player’s score. If he made ten out of ten or zero out of ten, you’d be fairly confident about making a judgment. But what about the kid who makes five, six, or

seven? Middling scores like these could be influenced by many things other than underlying potential for free-throw shooting or basketball playing. How much practice was involved? Was the kid having a good or a bad day? Roughly the same is true, I suggest, for standardized-test scores. Are they inflated by middle-class advantages such as prep courses, private schools, and tours of European cathedrals? Are they deflated by race-linked experiences such as social segregation and being consistently assigned to the lower tracks in school?

In sum, black college students are not as underprepared in academic skills as their group score deficit is taken to suggest. The deficit can appear large, but it is not likely to be the sole cause of the troubles they have once they get on campus.

Showing the insufficiency of one cause, of course, does not prove the sufficiency of another. My colleagues and I believed that our laboratory experiments had brought to light an overlooked cause of poor college performance among non-Asian minorities: the threat to social trust brought about by

the stereotypes of the larger society. But to know the real-life importance of this threat would require testing in situ, in the buzz of everyday life.

To this end Steven Spencer, Richard Nisbett, Kent Harber, Mary Hummel, and I undertook a program aimed at incoming first-year students at the University of Michigan. Like virtually all other institutions of higher learning, Michigan had evidence of black students’ underachievement. Our mission was clear: to see if we could improve their achievement by focusing on their transition into college life.

We also wanted to see how little we could get away with—that is, to develop a program that would succeed broadly without special efforts. The program (which started in 1991 and is ongoing)

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created a racially integrated “living and learning” community in a 250-student wing of a large dormitory. It focused students on academic work (through weekly “challenge” workshops), provided an outlet for discussing the personal side of college life (through weekly rap sessions), and affirmed the students’ abilities (through, for example, reminding them that their admission was a vote of confidence). The program lasted just one semester, although most students remained in the dormitory wing for the rest of their first year.

Still, it worked: it gave black students a significant academic jump start. Those in the program (about 15 percent of the entering class) got better first-year grades than black students outside the program, even after controlling for differences between these groups in the skills with which they entered college. Equally important, the program greatly reduced underperformance: black students in the program got first-year grades almost as high as those of white students in the general Michigan population who entered with comparable test scores. This result signaled the achievement of an academic climate nearly as favorable to black students as to white students. And it was achieved through a concert of simple things that enabled black students to feel racially secure.

One tactic that worked surprisingly well was the weekly rap sessions—black and white students talking to one another in an informal dormitory setting, over pizza, about the personal side of their new lives in college. Participation in these sessions

reduced students’ feelings of stereotype threat and improved grades. Why? Perhaps when members of one racial group hear members of another racial group express the same concerns they have, the concerns seem less racial. Students may also learn that racial and gender stereotypes are either less at play than they might have feared or don’t reflect the worst-feared prejudicial intent. Talking at a personal level across group lines can thus build trust in the larger campus community. The racial segregation besetting most college campuses can block this experience, allowing mistrust to build where cross-group communication would discourage it.

Our research bears a practical message: even though the stereotypes held by the larger society may be difficult to change, it is possible to create niches in which negative stereotypes are not felt to apply. In specific classrooms, within specific programs, even in the climate of entire schools, it is possible to weaken a group’s sense of being threatened by negative stereotypes, to allow its members a trust that would otherwise be difficult to sustain. Thus when schools try to decide how important black-white test-score gaps are in determining the fate of black students on their campuses, they should keep something in mind: for the greatest portion of black students—those with strong academic identities—the degree of racial trust they feel in their campus life, rather than a few ticks on a standardized test, may be the key to their success.

This article reprinted with permission from the August, 1999, issue of The Atlantic Monthly magazine. Claude M. Steele is the Lucie Stern Professor in the Social Sciences at Stanford University.

Addressing the Recruitment and Retention of Faculty of Color in Higher Education (cont’d)

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- 4) Encourage and create arenas where deans, department chairs, and senior faculty can establish personal contact with faculty from other racial and ethnic groups. The development of personal relationships can help dispel myths and stereotypes.
- 5) Conduct interviews with former faculty of color with respect to institutional climate.
- 6) Encourage social and other activities to build

community and promote networking among faculty of color.

- 7) Allocate funding for target of opportunity hiring for faculty of color in two-year colleges.

For additional recommendations from the Keeping Our Faculties symposium, see the full text of this article at the DiversityWeb.org website (www.diversityweb.org). This article reprinted with permission from the author. Caroline Turner is a Fellow of the American Council on Education at California State University, Stanislaus.

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