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Stopping the Female Brain Drain in Science

The US has made a major effort over the past 30 years to attract more outstanding US students, particularly women, into research science.ⁱ Women have risen to the challenge with significant increases in all the physical sciences and engineering, and they have made a huge advance in the life sciences, where they receive more than 50% of all PhDs.ⁱⁱ

Women now represent a large part of the talent pool for research science, but many studies indicate that they are more likely than men to “leak” out of the pipeline before obtaining a tenured position at a college or university.ⁱⁱⁱ A recent report by the National Research Council of the National Academy of Sciences confirmed that women who receive PhDs in the sciences were less likely than men to seek academic research positions—the path to cutting-edge discovery—and they were more likely to drop out before attaining tenure if they did take on a faculty post.^{iv} The loss of these women, together with serious increases in European and Asian nations’ capacity for research, means the long-term dependability of a highly-trained US workforce and global preeminence in the sciences may be in question.^v

Our research at the University of California, Berkeley,^{vi} clearly identifies that the leak is predominantly associated with starting a family. Across the country, married women scientists with young children who have received their PhDs are 37% less likely to enter a tenure track position than married men with children. This is the well-known “pool problem” where women with PhDs do not apply for entry level tenure track jobs in the same proportion as men PhDs. Most telling, there is little difference in applications between single women without young children and men who are married with young children. A similar leak occurs at the point of granting tenure: married women with young children are 27% less likely on a yearly basis to achieve this goal than married men with young children.

Young women scientists often make their decisions to avoid a tenure track research career in graduate school, before they become mothers. Our study of all University of California doctoral students, both men and women, indicated that they were concerned about the family friendliness of possible career paths, but research-intensive universities have a bad reputation; they are considered the least family friendly of a range of possible career choices.^{vii}

Both men and women graduate students report a shifting away from the career goal of research professor during their graduate student years, women more likely than men. Career-life issues were the most commonly cited reasons why students changed their minds, but women do so more often than men and are more than twice as likely as men to cite issues related to children.^{viii}

Those young scientists who do become mothers in graduate school (a small percentage) displayed an intensified flight response away from becoming a professor with research emphasis. Forty-six percent of these mothers said they wanted to pursue a career goal of professor with research emphasis at the beginning of their doctoral studies but only 11% held to this goal after childbirth. Fathers too showed a decline away from their original goal of research professor (from 59% to 45%), modest in comparison to the steep decline among women.

We asked the women in this group to explain in their own words why they had changed their career goal. Overwhelmingly these individuals cited family-life issues in their decision to alter their career goals.

For example, one woman wrote, “I think it might be easier to balance work and family in a faculty position where the emphasis is on teaching.”^{ix} Another said, “I feel that for me, research demands too much time away from my family. Also, as a woman, I don’t feel as if the current academic environments are any more supportive of women with families.”^x

Postdoctoral fellowships are the next step after the PhD for most scientists aiming toward a career in research science. In our survey of all postdoctoral scholars in the UC system, “issues related to children” was the only issue that the majority of women who shifted their career goal away from research professor cited as very important. Women postdoctoral scholars who had a child while a postdoctoral

continued on next page

INSIDE

Data Sources	4
Extending the Pipeline	6

Stopping the Female Brain Drain in Science

scholar, which many do, were twice as likely to change their career goal away from research science as men and twice as likely as women with no children and no future plans to have them.^{xi}

From a young woman scientist's point of view the collision course between career timing and family timing may be worsening—the average age for tenure receipt among tenure-track faculty in the sciences was 36 in 1985, and extended out past age 39 by 2003. This brings into question the long held wisdom that one could “wait until tenure” before starting a family.^{xii}

So what are we doing to solve this problem? Not enough. There is progress at the faculty level, but our young scientists, the graduate students and the postdocs who are making their life career choices are gravely under-benefited. In our survey of the Association of American Universities (AAU)—the 62 pre-eminent research institutions that receive the bulk of the federal support for science—we found that 43% provided no or very limited ad hoc leave policies for graduate student mothers and only 13% offered a baseline of at least six weeks of guaranteed paid leave. For postdoctoral fellows, 15% of universities offered no leave or had very limited policies while a mere 23% provided a baseline of at least six weeks of guaranteed paid leave. Few of these young scientists are eligible for the job-protected 12-week leave of the Family Medical Leave Act. Faculty mothers fared much better, with 58% of institutions providing a baseline paid leave, but by this time many women have decided against scientific research careers.^{xiii}

Absence of childbirth policies, particularly for graduate students and postdocs, may mean that some universities are out of compliance with Title IX. We think of Title IX in conjunction with women's sports, but Title IX also covers pregnancy discrimination. It requires that research universities receiving federal funds 1) treat pregnancy as a temporary disability for purposes of calculating job-related benefits, including any employer-provided leave, and 2) provide unpaid, job-protected leave for “a reasonable period of time” if the institution does not maintain a leave policy for employees.^{xiv} It is the responsibility of the federal agency which funds the research to assure compliance; currently this is not being done.^{xv}

Federal agencies that fund the lion's share of research activities at universities across the nation defer to the local personnel policies of institutions for fringe benefits, including family responsive policies, based on OMB Circular A-21, Cost Principles for Educational Institutions.^{xvi} Although this approach has the clear advantage of protecting the autonomy of local institutions—a hard-fought and protected principle among universities and colleges—the lack of guidance and oversight has resulted in limited benefits for America's researchers. This reinforces the belief that fast-track academic careers, particularly in the sciences, are not family friendly.

Both research universities and federal agencies have taken some initial but uncoordinated steps toward offering family responsive benefits.

Some AAU institutions have put in place family-responsive policies, benefits, and resources, including time-based policies and benefits such as stopping the clock (i.e., tenure-clock extension), various child care supports such as on- and off-campus centers, monetary supplements such as tuition remissions, and other resources such as lactation rooms.

Federal agencies have made similar efforts, with some agencies—particularly NIH and NSF—standing above the rest. Efforts include the provision of no-cost extensions for caregiving purposes (typically providing an additional year to complete the project, with no additional funds), grant supplements to support family responsive policies or needs, gender equity workshops, formalized agency policies or statements supporting women in the academic pipeline, allowing part-time effort on fellowships or grants, and extending the fellowship period for caregiving. However, the lack of coordination between research universities and federal agencies creates inconsistent and inadequate coverage.

There are several immediate initiatives that federal agencies, in cooperation with universities could undertake.

Promote clear, well-communicated, baseline family responsive policies for all classes of researchers.

As described at length in this report, America's researchers do not receive enough family-responsive benefits, particularly the more junior researchers. Together, federal agencies and universities can make headway in solving this systemic problem.

Federal agencies, particularly the National Institutes of Health, the National Science Foundation, and the nonprofit organization The American Association for the Advancement of Science, which oversees federally funded research fellows for many of the federal granting agencies, can help by setting equitable, clearly communicated baseline family responsive policies for their fellows. At the same time, universities need to adopt baseline family-responsive policies for all of their classes of researchers—not just faculty. Graduate student researchers and postdoctoral scholars receive the most limited benefits and are arguably the most important in affecting the future of US science.

Provide federal agency or university supplements to offset family event productivity loss.

Without providing additional financial supplements in association with family responsive policies, faculty principal investigators, or PIs—those with primary responsibility for the design, execution, and management of a research project—will continue to bear the brunt of supporting family-related absences from their research dollars. This dynamic is unfair to PIs and may create a situation where they will find it to their advantage to avoid hiring researchers who might eventually need family-responsive policies. This becomes an unintended form of discrimination against women. To avoid this structural difficulty, supplementary funding needs to be provided when researchers who are paid off of grants take necessary leaves/modifications.

Collaboratively move toward a full package of family friendly policies that take into account the career-family life course.

All major research universities should look to build a family-friendly package of policies and resources, and federal agencies can provide much more than they already do. Sharing and wide-scale adoption of proven practices are necessary.

Remove time-based criteria for fellowships and productivity assessments that do not acknowledge family events and their impact on career timing.

The lock-step timing of academia needs to be more flexible. Time caps and barriers to entry—such as those that require a postdoctoral scholar position to begin within a certain number of years following receipt of the PhD—that set rigid sequential deadlines should be removed. Universities and federal agencies need to examine all of their policies in this regard and look for ways to encourage reentry into the pipeline for academic researchers who take time off for giving birth or caring for children and promote a more holistic concept of career patterns that honors the larger needs of individuals.

Collect and analyze the necessary data to make sure existing and future policy initiatives are effective in meeting researchers' needs and comply with Title IX.

The lack of necessary data and multi-year commitments to these efforts continues to hamper our delivery of truly effective initiatives. Decisions about family-responsive policies, programs, and benefits will continue to be made on intuition and anecdote if they are not tracked by systematic longitudinal data. Both federal agencies and universities need to build and maintain the necessary datasets to assess whether our efforts are yielding positive results and whether Title IX requirements are being met. Federal agencies can provide more grant programs to help determine whether our efforts are working, and Title IX compliance reviews should include questions on family-responsive policies.

Our current inadequate family-responsive benefits for America's researchers makes no economic sense. In the world of federal grants individuals who drop out of science after years of training represent a huge economic loss and are a detriment to our nation's future excellence. Given the Obama administration's interest in maintaining America's competitive advantage, future federal investments should be focused on patching the leaky pipeline in the sciences. Doing so will help us preserve our competitive edge.

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Endnotes

ⁱ Congressional Commission on the Advancement of Women and Minorities in Science, Engineering and Technology Development, National Science Foundation, *Land of Plenty: Diversity as America's Competitive Edge in Science, Engineering and Technology* (Washington, DC: National Science Foundation, 2000).

Ronald Burke and Mary Mattis, eds., *Women and Minorities in Science, Technology, Engineering, and Mathematics: Upping the Numbers* (Northampton, MA: Edward Elgar Publishing, 2007).

ⁱⁱ US Census Bureau, "Educational Attainment in the United States: 2008," available at <http://www.census.gov/population/www/socdemo/education/cps2008.html>

National Science Foundation, Survey of Earned Doctorates, retrieved from WebCaspar 4/15/09, <http://webcaspar.nsf.gov/>

ⁱⁱⁱ Mary Ann Mason and Marc Goulden, "Do Babies Matter? (Part II) Closing the Baby Gap," *Academe* 90 (2004): 3-7.

Mary Ann Mason and Marc Goulden, "Do Babies Matter?" *Academe* 88 (2002): 21-27.

Committee on Maximizing the Potential of Women in Academic Science and Engineering, Committee on Science, Engineering, and Public Policy, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine, *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering* (Washington DC: National Academies Press, 2007).

Stephen Ceci, Wendy Williams, and S. Barnett, "The Underrepresentation of Women in Science: Sociocultural and Biological Considerations" *Psychological Bulletin* 135 (2009): 172-210.

American Council on Education, Office of Women in Higher Education, "An Agenda for Excellence: Creating Flexibility in Tenure-Track Faculty Careers" (Washington, DC: American Council on Education, 2005).

J. Scott Long, National Research Council, *From Scarcity to Visibility: Gender Differences in the Careers of Doctoral Scientists and Engineers* (Washington, DC: National Academies Press, 2001).

Donna Nelson, "National Analysis of Diversity in Science & Engineering Faculties at Research Universities," available at <http://chem.ou.edu/~djn/diversity/briefings/Diversity%20Report%20Final.pdf>

^{iv} National Research Council, "Gender Differences at Critical Transitions in the Careers of Science, Engineering, and Mathematics Faculty" (Washington, DC: National Academies Press, 2009).

^v Derek Hill and others, National Science Foundation, Division of Science Resources Statistics, "Changing US Output of Scientific Articles: 1988–2003" (Arlington, VA: National Science Foundation, 2007).

Committee on Science, Engineering, and Public Policy, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine of the National Academies, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Future* (Washington, DC: National Academies Press, 2007).

James Adams, "Is the US Losing Its Preeminence in Higher Education?" Working Paper 15233 (Cambridge, MA: National Bureau of Economic Research, 2009).

continued on page 4

Stopping the Female Brain Drain in Science

Matthew Kazmierczak, Josh James, and William Archey, AeA, *Advancing the Business of Technology*, “Losing the Competitive Advantage? The Challenge for Science and Technology in the United States” (Washington, DC: American Electronics Association, 2005).

Matthew Kazmierczak, Josh James, and William Archey, AeA, *Advancing the Business of Technology*, “We are Still Losing the Competitive Advantage: Now is the Time to Act” (Washington, DC: American Electronics Association, 2007).

Titus Galama and James Hosek, “US Competitiveness in Science and Technology” (Santa Monica, CA: RAND National Defense Research Institute, 2008).

Neal Lane, “US Science and Technology: An Uncoordinated System that Seems to Work,” *Technology in Society* 30 (2008), 248-263.

^{vi}A national longitudinal survey, the Survey of Doctorate Recipients; surveys of four academic researcher populations in the University of California system, including doctoral students, postdoctoral scholars, academic researchers, and faculty; a survey of the 62 member institutions of the Association of American Universities, a nonprofit organization of leading public and private research universities in the United States and Canada; and a survey of 10 of the major federal granting agencies.

^{vii}Mary Ann Mason and Marc Goulden, “UC Doctoral Student Career and Life Survey” (Berkeley, CA: UC Berkeley, 2006), available at <http://ucfamilyedge.berkeley.edu/grad%20life%20survey.html>.

^{viii}*Ibid.*

Marc Goulden, Karie Frasch, and Mary Ann Mason, “UC Postdoctoral Scholar Career and Life Survey” (Berkeley, CA: UC Berkeley, 2008), available at <http://ucfamilyedge.berkeley.edu/UC%20Postdoctoral%20Survey.html>.

See also, Mary Ann Mason, Marc Goulden, and Karie Frasch, “Why Graduate Students Reject the Fast Track,” *Academe* 95 (2009): 11-16.

Total respondents for the doctoral student survey were 8,373 with an overall response rate of 43%. Total respondents for the postdoctoral scholar survey were 2,390 with an overall response rate of 43%.

^{ix}Marc Goulden and Mary Ann Mason, “Doctoral Student Career and Life Survey” (UC Berkeley, 2006), available at <http://ucfamilyedge.berkeley.edu/grad%20life%20survey.html>.

^x*Ibid.*

^{xi}Marc Goulden, Karie Frasch, and Mary Ann Mason, “UC Postdoctoral Scholar Career and Life Survey” (Berkeley, CA: UC Berkeley, 2008), available at <http://ucfamilyedge.berkeley.edu/UC%20Postdoctoral%20Survey.html>.

^{xii}CAP study

^{xiii}CAP study

^{xiv}*Ibid.*

^{xv}CAP study

^{xvi}Office of Management and Budget, “Cost Principles for Educational Institutions,” OMB Circular A-21 (Washington, DC: Author, August 8, 2000), p. A-21.

Data Sources: Time-To-Degree for Doctorate Recipients

The length of time it takes to earn a doctoral degree is a concern to many graduate school administrators, faculty, and students. While the nature of doctoral education in the United States necessitates a multi-year combination of course work, research and dissertation writing, a lengthy time-to-degree results in a high opportunity cost to doctorate recipients who may not enter the workforce until their early thirties. Using data from the annual Survey of Earned Doctorates (SED), this article examines time-to-degree by broad field and demographics, and presents data on the overall improvement in time-to-degree over the past two decades.

Time-to-Degree since Starting Graduate School

The SED Summary Report (NSF, 2009) provides two measures of time-to-degree. The first is the number of years between starting graduate school and receiving the doctoral degree. This measure includes time enrolled in a master's program as well as the doctoral program. For doctorate

recipients in academic year 2007-08, the median for this measure of time-to-degree was 7.7 years, but there was considerable variation by broad field (see Figure 1). Doctorate recipients in physical sciences and engineering had the shortest median time-to-degree (6.7 years) while the median for students in education was 12.7 years.

The median time-to-degree was higher in 2007-08 for women, US citizens and permanent residents, and US minority students than for men, temporary visa holders, and US majority students, respectively. However, some of these differences may simply be a reflection of differences in time-to-degree by field, with women, US citizens and permanent residents, and US minority students less likely than their respective counterparts to be in science and engineering fields where times-to-degree are shorter.

Overall, the median number of years to the doctorate in 2007-08 was 7.4 years for men versus 8.0 years for women. For

temporary visa holders, the median number of years between starting graduate school and receiving the doctoral degree was 7.5, slightly shorter than the 7.7 years for US citizens and permanent residents. Among US citizen and permanent resident racial/ethnic groups, the median time-to-degree was shortest for multi-race (7.6 years), White (7.7), and Asian (7.7) doctorate recipients, and longest for American Indian (9.6), African American (9.5) and Hispanic (8.0) students.

Time-to-degree has decreased considerably over the past two decades. The median number of years to the doctorate since starting graduate school was 8.7 years in academic year 1987-88, exactly one year longer than the median 7.7 years for doctorate recipients in 2007-08. Even as recently as 2002-03 the median time-to-degree was 8.5 years, indicating that much of the improvement in time-to-degree occurred in the past five years. While time-to-degree improved in most broad fields over the past two decades, in engineering and physical sciences the median number of years to the doctorate was the same in 1987-88 as in 2007-08 – 6.7 years. In contrast, time-to-degree dropped in the humanities from 10.7 years in 1987-88 to 9.3 in 2007-08, and time-to-degree dropped in education from 13.9 years to 12.7 over the same time period.

Time-to-Degree since the Baccalaureate

The second measure of time-to-degree provided by the SED is the number of years between receiving a bachelor's degree and receipt of the doctorate. Since many students take time off between receipt of the baccalaureate and starting graduate studies, this measure understandably increases the time-to-degree. Among doctorate recipients in 2007-08, the median for this measure of time-to-degree was 9.4 years, 1.7 years longer than the median 7.7 years between starting graduate school and earning a doctorate. Once again, there were large variations by field. Students in the sciences and engineering again took the least amount of time to earn a doctorate: 7.7 years in physical sciences, 7.9 years in engineering, 8.6 years in life sciences, and 9.6 years in social sciences, compared with 11.3 years in the humanities, 12.1 years in other fields, and 17.0 years in education.

This measure of time-to-degree also decreased over the past two decades in most broad fields, but there were two exceptions. In physical sciences, median time-to-degree since receipt of the baccalaureate increased slightly, from 7.5 years in 1987-88 to 7.7 in 2007-08. And in education, the field with the longest time-to-degree, the median was 17.0 years in both 1987-88 and 2007-08.

Implications

Four important caveats need to be considered in the interpretation of these time-to-degree data. First, the data do

not take into account enrollment status, which can partly explain the differences by broad field. In fields like education part-time enrollment is more common than in science and engineering fields, resulting in a longer median time-to-degree in education and shorter times-to-degree in science and engineering.

The second caveat is that the data do not take into account stop-outs. While stop-outs may not affect broad fields differently, stop-outs do contribute to a longer overall time-to-degree. The SED questionnaire does ask respondents to indicate if there was "...any time from the year you entered your doctoral program and the award of your doctorate that you were not working on your degree (that is, not taking courses or working on your dissertation)?" Respondents answering 'yes' to this question were asked to provide the number of years they stopped out. However, while the SED collects these data, to date they have not been included in the calculation of time-to-degree. And as the question is currently phrased, it asks for stop-out time to be rounded to whole years, which could provide an inaccurate measure to use for calculating actual time-to-degree.

The differences in the nature of research and research funding across broad fields should also be considered when interpreting time-to-degree data. The individual nature of research in the humanities and field research requirements in fields such as

archaeology likely contribute to longer time-to-degree than the team-based research typical of the lab sciences and engineering.

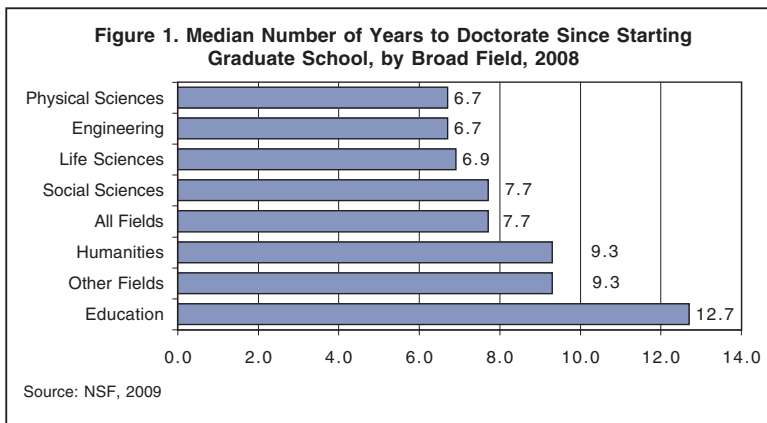
Finally, while time-to-degree data provide an important benchmark, the data do not take into account students who fail to complete their doctoral programs. Data from the CGS PhD Completion Project have shown that only 57% of all doctoral students

complete their degree within 10 years (CGS, 2008). While time-to-degree is important, it needs to be examined in combination with completion data to ensure that students who enter doctoral programs actually complete those programs and that they do so in a timely manner.

By Nathan E. Bell, Director, Research and Policy Analysis

References:

- Council of Graduate Schools (CGS). 2008. *PhD Completion and Attrition: Analysis of Baseline Program Data from the PhD Completion Project*. Washington, DC: Council of Graduate Schools.
- National Science Foundation (NSF). 2009. *Doctorate Recipients from US Universities Summary Report 2007-08*. Arlington, VA: National Science Foundation.



Extending the Pipeline: Replicating a Successful Model for Enhancing Diversity in Graduate School at the University of Memphis

Graduate education serves as the catalyst for systemic change in the promotion and development of a diverse professoriate; however, there is a relative dearth of women and minorities in science, mathematics, engineering, and technology, with low percentages holding PhD degrees in all disciplines. There is a clear need for comprehensive programs designed to increase these numbers, particularly in the STEM disciplines. A review of data from the National Science Foundation from the years 1995-2004 shows promising increases in the number of women and domestic minorities who completed bachelor's degrees in science and engineering, primary targets for recruitment into doctoral programs, where the total number of doctoral degrees awarded to women and underrepresented minorities actually decreased between 1996 and 2005.¹

The small percentage of domestic minorities enrolled in graduate programs is of great concern, particularly in light of the changing demographics in the US. Demographers predict that the largest increases in growth among US citizens will continue to be Latinos, African Americans, and Asian Americans, and yet the number of research doctorates among students from underrepresented populations is 12% and only 10% in the STEM disciplines. Thus, graduate schools across the country are seeking specific strategies to enhance diversity.

The University of Memphis is committed to diversity. The number of minorities in general, and African Americans in particular, matriculating and completing master's and doctoral programs at the University of Memphis is substantial. For example, in Fall of 2009, 28% of the graduate school population at the University of Memphis was African American, 33% domestic minorities. This relatively high percentage of minority enrollment at the graduate level exceeds national rates and highlights the University's commitment to diversity.

A Model Program at the University of Memphis

The most successful strategy to recruit students from underrepresented populations into graduate programs is to establish a pipeline partnership between a minority-serving institution and a majority-serving institution. One nationally recognized partnership at the University of Memphis is the PhD program in Philosophy and the undergraduate program at Spelman College. Recently featured in *The Chronicle of Higher Education* ("Black Women Seek a Role in Philosophy" by Robin Wilson, September 28, 2007), the number of African Americans holding PhDs in Philosophy, academe's oldest discipline, is approximately 100 or 1%. The article further states, "the number of black female philosophers has been inching up lately, thanks mostly to the graduate program at the University of Memphis" (p. B5). Approximately 30 of the 100 African American PhDs in Philosophy are female and most are alumnae of the

University of Memphis. Dr. Robert Bernasconi worked initially to establish the pipeline with Spelman College, and now that feminist philosophy and race theory are focus areas of the scholarship in the Department, women and African American students enter the University of Memphis from different portals. Equally important is the fact that these students have some of the highest GRE scores and grade point averages at the University. This network of scholars served as the model for the CGS/Peterson's Award for Innovation in Promoting an Inclusive Graduate Community that the University of Memphis received in 2006.

The CGS/Peterson's Award was used to create an "Inclusive Graduate Community Competitive Grant" in the Graduate School. A diverse team of reviewers selected the faculty recipients based on the degree of underrepresentation in the discipline and the history of the department's efforts to recruit women and minorities. The Departments of Philosophy and Mathematics, the PhD program in Rhetoric, and the doctoral programs in Counseling and Counseling Psychology were selected.

Philosophy

The aforementioned Department of Philosophy was selected based on its impressive record of graduating the highest number of African American doctorates in the country and its contribution to race and feminist scholarship in philosophy. The funds received from the CGS/Peterson's Inclusive Graduate Community award were used to support the "Ida B. Wells Philosophy Conference," founded by African American graduate students to promote discussion of philosophical issues arising from the African American experience and to provide a context in which to mentor undergraduates. Speakers included stellar alumni and international researchers. The conference received considerable coverage in the local newspaper appearing as the lead article with five photographs. This level of marketing and promotion could not have been achieved without the CGS/Peterson's Award.

Mathematics

The program in Discrete Mathematics and Combinatorics at the University of Memphis tied for 14th ranking by America's Best Graduate Schools in 2006 and attracts some of the brightest graduates in the world. However enrollment of underrepresented, domestic students is low. Selected undergraduate students were invited to a campus visit to meet with faculty mentors and to attend a colloquium led by Dr. Ralph Faudree, Provost and winner of the Euler Award (the highest international award in Mathematics). A second conference supported with CGS/Peterson's funds was a joint, recruitment initiative with the Department of Mathematics and the College of Education targeting teachers of Mathematics, many of whom are women and minorities.

Communication

The PhD program in Rhetoric, ranked 13th in the country by the National Communication Association, established a pipeline with the Memphis Theological Seminary (MTS) to recruit African American scholars into the program. The Department used the CGS/Peterson's grant to co-sponsor with MTS a conference on the rhetoric of Dr. Martin Luther King, Jr. The conference was held on April 1, 2008 at the National Civil Rights Museum and was coordinated with a host of other activities and events commemorating the 40th anniversary of Dr. King's assassination.

Highlights of the conference included an opening address by Dr. Frank Thomas, then a Minority Fellow completing a dissertation on King's rhetoric, who provided an in-depth analysis of King's last speech, "I've Been to the Mountain-Top," delivered in Memphis on April 3, 1968, presentations by students from MTS and the Department's graduate program, and a presentation by Dr. Maxine Smith, a pioneer in the Memphis civil rights movement, who reflected on King's legacy in Memphis. The President of the Civil Rights Museum, the Dean of the College of Communication and Fine Arts, and the Chairman of the Memphis Tourism Education Foundation then hosted a reception for more than 100 conferees resulting in the recruitment of students from underrepresented populations.

Counseling and Counseling Psychology: Increasing Enrollment of African American Males

The fourth CGS/Peterson's grant was awarded to faculty members in Counseling and Counseling Psychology. The American Counseling Association and the American Psychological Association believe that diversity is a fundamental component of training in the 21st century, yet there remains a paucity of African American males in these programs. Therefore, the recipients of the CGS/Peterson's grant used their award to conduct research using a focus group composed of African American males to identify possible solutions to the perceived challenges of recruiting and retaining African American male students.

The focus group was composed of six African American male graduate students matriculating in Counseling or Counseling Psychology. All respondents were tuition paying students who stated that they were essentially left to their own devices to identify financial aid resources. They also stressed the importance and need for mentors. It was interesting to note that the participants did not stridently advocate for a mentor who was ethnically similar to themselves. For the participants, competency was the most salient characteristic. As expressed by one respondent: "For me, the most important thing is, does my mentor have the skills and willingness to mentor me?"

Recommendations

- Graduate programs should take a more comprehensive approach to make transparent the selection processes for graduate assistantships and fellowships, mentoring, and paths to program completion.
- Opportunities to network with other students are critical to the recruitment and retention of African

American males. The literature suggests that many students of color experience feelings of being ostracized; a safe space in which such students can feel connected heightens self-efficacy. This sense of support is important in combating negative feelings that sometimes arise from being one of few minorities in an academic setting.

- Emphasis should be placed on marketing programs which leads to a domino effect; students of color often gravitate to programs in which there are other minority students enrolled and use their cultural backgrounds and experiences to enhance the learning process.

Summary

The pipelines, portals, programs, and research activities created or enhanced by the CGS/Peterson's Award for Innovation in Promoting an Inclusive Graduate Community are now institutionalized at the University of Memphis. Successful outcomes of each of the aforementioned programs and/or research activities include increased enrollment of doctoral students from underrepresented populations as well as a greater commitment to and appreciation for the richness of experiences and strengths of students from underrepresented populations.

In April of 2009, a graduate from the doctoral program in Philosophy, Kristie Dotson, and the author had the wonderful opportunity to participate in the CGS Legislative Forum held at the Library of Congress in Washington, DC. Dr. Dotson moved the audience by describing the transformative effects of the PhD. Coming from an environment with limited resources and a family that faced homelessness, Dr. Dotson now serves as an Assistant Professor at Michigan State University. Her story not only captures the importance of enhancing diversity and inclusiveness in graduate programs, but also reflects the empowerment of the PhD for underrepresented students and their families.

By Karen Weddle-West, Vice Provost for Graduate Programs, University of Memphis

Reference

Gose, B. (2007, September, 27). The professoriate is increasingly diverse, but that didn't happen by accident. *The Chronicle of Higher Education*, p. B2.

Endnote

¹Mary J. Frase, personal communication, April 26, 2008

Note: The last Peterson's Award was made in 2008. In 2009, ETS, in partnership with CGS, created a new award to address achieving success in graduate education and advancing the goal of a more diverse student body. Information on this award can be found on the CGS website at: www.cgsnet.org.



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