

FINAL REPORT

AN ACTION STRATEGY FOR GEOGRAPHY

DEPARTMENTS AS AGENTS OF CHANGE:

A REPORT OF THE AAG DIVERSITY TASK FORCE

OCTOBER 2006

TABLE OF CONTENTS

Members of the AAG Diversity Task Force	3
Executive Summary	5
<i>Background</i>	5
<i>Present Actions of the Task Force</i>	6
<i>Recommendations</i>	8
Chapter 1: Introduction	11
<i>Past Efforts to Achieve Diversity</i>	12
Chapter 2: Diversity Activities of the Task Force Since 2003	21
<i>Background and Rationale</i>	21
<i>Facilitation of Ongoing AAG Initiatives on Diversity</i>	30
Chapter 3: Diversity Challenges Confronting Geography Departments: Programs and Stand-Alone Geographers	38
<i>The Changing Demographics of the United States</i>	38
<i>Surveys and Discussions of Diversity Related to Geography</i>	41
<i>Summary Results of AAG Diversity Task Force Survey</i>	47
<i>Conclusions</i>	64
Chapter 4: Geography Departments as Agents of Change: Recommendations through Action	68
<i>The Intent of the Recommendations</i>	68
Appendix: Models of Diversity Programs that Resulted in Measurable Change	76
<i>Elementary and Secondary Levels</i>	76
<i>Community College Alliances</i>	78
<i>Undergraduate and Graduate Approaches</i>	81

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EXECUTIVE SUMMARY: AN ACTION STRATEGY FOR GEOGRAPHY
DEPARTMENTS AS AGENTS OF CHANGE

Background

This report reflects the most recent organized and institutional effort by the AAG council to enhance diversity, especially of the most underrepresented groups in geography—African Americans and Latinos. Although efforts to enhance diversity in the discipline can be traced back forty years, the renewed emphasis on diversity coincided with the election of Duane Nellis as president of the AAG and the appointment of Douglas Richardson as the new AAG Executive Director. In 2003, Nellis and Richardson worked to establish a Diversity Task Force (DTF) with the approval of the AAG Council.

The Charge

The Task Force was charged with a five-part mission:

1. developing strategic initiatives and projects that will enhance diversity, especially of the most underrepresented groups, in geography;
2. facilitating ongoing AAG initiatives on diversity;
3. recommending a set of long-term goals to the AAG to enhance diversity in geography;
4. building upon reports commissioned in 2000 and 2001 by the AAG Affirmative Action and Minority Status Committee; and
5. promoting the participation in and focus on AAG panels, forums, and workshops concerned with enhancing diversity in the discipline.

The timeline for achieving these goals was three years. This report reflects the result of the Task Force's efforts.

Present Actions of the Task Force

The DTF documented past efforts of the Commission on Geography and Afro-America (COMGA) to achieve diversity. Those efforts, which started in the 1960s, included recruitment activities and recommendations (see Chapter 1). Some of the recommendations were implemented, but most were not. Surveys of geography departments indicated that there were some improvements in diversity, but these were followed by several years of continued under-representation of racial and ethnic minorities. By 2003, the Executive Director, AAG President, and AAG Council all felt the need to renew the effort by appointing a Diversity Task Force.

The DTF sought to focus its energy on ten “doable activities” that would result in important progress toward the goal of enhancing diversity among K-12, undergraduate, graduate students, and faculty in the discipline of geography. It focused on:

1. encouraging special sessions promoting diversity at the AAG meetings;
2. sponsoring race/ethnicity and place conferences;
3. developing a strategic relationship with Howard University;
4. developing an online AAG diversity clearinghouse;
5. developing employment/career information to help promote geography to underrepresented groups;
6. conducting a survey on the state of diversity in geography departments;
7. increasing publicity and promoting diversity in the AAG newsletter;
8. exploring ways to encourage participation of underrepresented undergraduate groups at the AAG annual meetings;

9. identifying and developing new funding and supporting existing funding proposals that enhance diversity at various points of intervention from K-12 through university and career trajectories; and
10. creating new linkages and re-energizing bridges among the many existing initiatives ongoing throughout the discipline.

The actions taken and their success are described in Chapter 2.

The Task Force devoted a great deal of time to the survey of diversity in geography departments. The survey of geography departments indicated the severe under-representation of and the difficulty in recruiting racial and ethnic minorities, principally African Americans and Latinos, at every level in the discipline, including undergraduates, graduate students, and faculty. Most undergraduate geography majors are recruited through general education world, regional, human, or physical geography courses; very few departments indicated that they recruited undergraduate majors through course offerings in ethnicity/race or course offerings on gender and geography—an indication that very few geography departments offer such courses. Special efforts are made by most responding departments to recruit minority and women graduate students and faculty. However, the challenge to enhance diversity in geography departments is difficult due in part to the self-defeating cycle of severe under-representation. Chapter 3 presents in detail the challenges of increasing the number of people in under-represented groups in geography.

In Chapter 4, the DTF provides departments with several recommendations for improving diversity in the discipline at the high school, undergraduate, graduate, and

faculty levels through recruitment, retention, and placement. The focus, unlike past recommendations, is on departments as agents of change.

Recommendations

The recommendations in this report were strongly influenced not only by the charge of the AAG Council and the severe lack of diversity in geography departments, but also by the Minority Opportunities through School Transformations (MOST) program. The American Sociological Association conceived MOST with the intention of finding ways to alter “business as usual” practices at colleges and universities.

From the very outset, the AAG DTF has had “measurable change” as its main goal. The DTF believes that “measurable change” can best be achieved by following the approach of **departments as agents of change**. The recommendations are summarized here. The Task Force also strongly feels that **the AAG and its Council and Central Office must place more emphasis and resources on improving diversity in our discipline by institutionalizing the Task Force work within the structure of our association**. For a more extensive discussion and rationale see Chapter 4.

- The department chair and the faculty who are the best ambassadors to participate in outreach and to sell geography to a diverse population should first **develop a recruitment plan**.
- Departments of degree-granting institutions should **engage in outreach to local community and commuter colleges**, since they are a source of great student diversity.

- In recruiting undergraduate students to geography, **departments in states with the largest percentage of racial minorities should take the lead and serve as role models.**
- The faculty, under the strong leadership of the chairperson, should **provide training in the discipline of geography** via summer workshops focusing on geography and/or Geographic Information Systems for teachers, especially minority teachers, who teach in junior high and high schools with large minority enrollments.
- Each Ph.D.-granting department of geography should develop a recruitment program with the agenda of **recruiting and funding at least one minority student annually** (via a graduate assistantship if possible but a fellowship if necessary). The commitment of financial support should be at least six years from the awarding of the baccalaureate to completion of the doctorate.
- Departments should **establish a policy that clearly indicates the importance of diversity in the faculty search process.** This important departmental policy should emphasize that the search committee must be as diverse as possible and that the final list of candidates to be interviewed must also be as diverse as possible based on the available pool.
- Departments should **conduct reviews of their curricula** to determine the degree to which diversity is included and, if necessary, change the curricula to make them more relevant to today's racially and ethnically diverse society.
- Each department should **regularly assess its "departmental climate"** to ensure that it is, ideally, free of tensions and hostility and that it fosters a healthy,

constructive and inclusive environment for all groups--students, faculty, and support staff.

- Departments and the AAG Central Office should **construct websites that clearly underscore the unwavering commitment to diversity.**

To assist the departments in their efforts to enhance diversity, this report provides models of diversity programs that resulted in measurable change (see appendix).

CHAPTER 1: INTRODUCTION

This report reflects the most recent organized and institutional effort by the AAG Council to promote diversity, especially of the most underrepresented groups (African Americans and Latinos) in geography. This renewed emphasis on diversity coincided with the election of Duane Nellis as president of the AAG and the appointment of Douglas Richardson as the new AAG Executive Director. With the approval of the AAG Council, Nellis and Richardson established the Diversity Task Force (DTF) in 2003. The AAG Council appointed the task force chair and selected its diverse membership.

The AAG Council, in consultation with the Executive Director Richardson, charged the DTF with the responsibility of carrying out the following goals:

1. developing strategic initiatives and projects that will enhance diversity, especially of the most underrepresented groups (African Americans and Latinos) in geography;
2. facilitating ongoing AAG initiatives on diversity;
3. recommending a set of long-term goals to the AAG to enhance diversity in geography;
4. building upon reports commissioned in 2000 and 2001 by the AAG Affirmative Action and Minority Status Committee; and
5. promoting the participation in and focus on AAG panels, forums, and workshops concerned with enhancing diversity in the discipline.

The timeline for achieving the goals was three years.

Past Efforts to Achieve Diversity

It is important to note that efforts to achieve diversity in the discipline are not new. There is a forty-year history of trying to increase diversity in geography. The goal of developing strategic initiatives and projects to enhance diversity in geography, particularly for the most underrepresented groups, can be traced back to 1964-1965 when, at the invitation of Gilbert White, Saul Cohen took a leave from Boston University to become the Executive Officer of the Association of American Geographers. In a decade of protests for civil rights, Cohen noted that geography in America was a segregated profession and that the time had come to be proactive in the recruitment of Blacks (Waterman, 2002). Cohen envisioned a geography training program for talented students from small southern (i.e. traditionally Black) colleges. He toured these colleges in 1964-65, arriving incidentally at Albany State in Georgia the day of the riots (Cohen, personal communication, January 16, 2006). That experience, according to Cohen (2006), “motivated me to persist in breaking the color barrier in our profession.” Cohen’s strategy was to determine what could be done to improve teaching and what could be developed to draw talented undergraduates from those predominantly Black colleges into graduate programs in geography. At the time, Harold Rose, who joined the University of Wisconsin at Milwaukee in the 1960s, was the only Black geographer with a Ph.D. in Geography (Waterman, 2002).

The outcome of Cohen’s trip to the South and his vision to enhance diversity led to a proposal, first to the AAG Council and then to the National Science Foundation and the U.S. Office of Education, to establish a Commission on Geography and Afro-America (COMGA). The government funded program’s goal was to recruit talented

undergraduates from predominantly Black colleges and universities by enrolling them in summer institutes at select universities that offered graduate programs in geography (Waterman, 2002). The five graduate departments selected for the COMGA program were Clark University, University of Chicago, University of Michigan, University of Wisconsin, and Syracuse University.

In 1968, Don Deskins at the University of Michigan became COMGA's first director. Under Deskins' leadership, with the strong support from faculty at the University of Michigan, several surveys of the status of Blacks in geography were conducted, followed by recommendations to enhance diversity. In 1968, Horvath, Deskins, and Larimore (1969) conducted a survey to determine the degree to which Black Americans were participating in geographic activities at selected predominantly white institutions in the United States. The survey revealed two Black faculty members in geography departments at such institutions: Harold Rose of the University of Wisconsin at Milwaukee, and Deskins himself. Twenty respondents offered recommendations for improvement to the AAG geography departments and faculty. The following recommendations for *action* were made (see Horvath, Deskins, & Larimore, 1969): The **AAG** was to:

1. establish a clearinghouse for information;
2. finance and support the AAG-Southern Colleges program;
3. expand the visiting scientist program;
4. establish a faculty exchange service;
5. devote an issue of a journal to "The Status of Black Geographers";
6. establish a commission on the status of Black geographers;
7. establish a placement service;

8. coordinate AAG-NCGE activities relevant to the changing of the status of Black professionals in geography;
9. develop special recruitment practices;
10. establish a scholarship program; and
11. introduce a geography syllabus on Black life for grades K-12.

Departments of geography were to act to:

1. establish a scholarship program;
2. develop special recruitment practices;
3. increase summer institutes;
4. establish a faculty exchange service;
5. develop interdepartmental programs with Black institutions;
6. establish a Senior Scholar in Residence program;
7. introduce a course in social geography; and
8. include African-American geography in the undergraduate curriculum paralleling Black history.

Individual faculty were to act to:

1. increase meaningful research on Black Americans; and
2. develop meaningful courses on Black America.

In 1970, COMGA again distributed questionnaires to graduate departments and to historically Black colleges and universities in order to evaluate the status of Blacks in the geographical profession. The questions were identical to those in the survey of 1968 (Horvath, Deskins, & Larimore, 1969). The survey identified 12 Black faculty members in graduate departments (Deskins and Speil, 1971). The survey also revealed more Black

students enrolled in geography at all levels. There was also an increased interest in research on Black America.

The respondents indicated the following *actions* for enhancing diversity. The AAG should act by:

1. advising Blacks of the opportunities in geography;
2. providing graduate fellowships for Blacks;
3. establishing a clearinghouse for information on the recruitment of Black students and faculty;
4. encouraging geographic research and curricula development which are more relevant to the Black experience;
5. encouraging the development of geography departments at Black schools;
6. promoting more summer institutes and in service programs for both secondary teachers and college faculty at Black schools;
7. promoting more expansive faculty exchange between geography departments and Black institutions; and
8. improving geographic education in Black high schools (Deskins & Speil, 1971).

In 1973, questionnaires identical to those distributed in 1970 were sent to 77 predominantly Black colleges and universities and 116 graduate geography departments. The results revealed that the number of Black faculty in 1974 was the same as in 1970. However, a significant change had occurred in the type of employment. In 1974, only 2 of the 12 Black faculty members were lecturers or instructors. The majority were at the rank of assistant professor. One was at the associate professor rank, and one was a full

professor. In 1970, most Black faculty members were lecturers or instructors (Deskins & Sibert, 1975).

The predominantly Black colleges and universities suggested that the AAG take the following actions:

1. providing information on current geographical literature and trends;
2. providing more visiting lecturers, particularly Black geographers;
3. providing funding for equipment and physical facilities;
4. promoting the importance of geography in solving the problems of modern society;
5. establishing a clearinghouse for information on staff availability;
6. assisting in program development through a consulting service; and
7. providing more fellowships for the graduate education of Blacks.

The graduate geography departments felt the following national actions would benefit their programs:

1. establishing a clearinghouse for information on the recruitment of Black students and faculty;
2. alerting Black students to geographical areas of study beyond social geography;
3. developing teaching materials dealing with issues affecting Black Americans;
4. providing more graduate fellowships for Blacks; and
5. continuing the work of COMGA (Deskins & Sibert, 1975).

Based on the surveys of geography departments, it appeared that COMGA's activities were instrumental in improving to some extent the status of Blacks in geography as measured by the increased enrollments of Blacks and the degrees awarded to them

(Shrestha & Davis, 1988). There was also evidence of an increase in the publication of articles on Black America.

Societal and institutional backlash in the 1980s overshadowed the gains of the late 1960s and early 1970s. COMGA became defunct (Shrestha & Davis, 1988). Not only Blacks suffered from the backlash; other racial minorities also suffered. Interest in increasing the number of minorities involved in geography declined along with geographic research on minority groups (Shrestha & Davis, 1988). The situation led geographers Nanda Shrestha and DeWitt Davis (1988) to conduct another survey. For the first time, the survey was to include not just Blacks but other racial minorities as well. For financial support for the survey, the researchers contacted Robert Aangeenbrug, AAG Executive Director in 1987, who agreed to sponsor the project. The survey was conducted on behalf of the AAG and its Affirmative Action and Minority Status Committee.

According to Shrestha and Davis (1988):

We proceed with the assertion that it is in everybody's interest to attract minorities to geography. In this endeavor the initial step is to increase the discipline's exposure. A lack of exposure to geography translates into a lack of familiarity with it; this prevents minority students from seeing geography as a valuable discipline. Improving the status of minorities in geography is a social imperative, for it not only increases the discipline's cultural diversity, but also involves minority students in a wholesome educational process, a process which enhances their spatial skills and knowledge such as an understanding of the earth, its resources, cultural

patterns, and political events and issues at the local, national, and global levels.

In October 1987, the AAG Central Office mailed a survey to 405 colleges and universities (371 in the United States and 34 in Canada). Despite several reminders, most of the major geography departments failed to return the survey. The results were based on a 43% response rate (Shrestha & Davis, 1988; 1989). The survey revealed that minority faculty (including Asians) constituted only 5%, or 75 geographers (14 females and 61 males). There were 28 Black geography faculty members, including 6 females, constituting 2.1% of the total faculty in the sample. There were 40 Asian geography faculty members, comprising 3%, and a total of 5 Hispanic and Native American geographers. The survey revealed 725 minority students in geography, including 248 females. This figure represented 8% of the total geography student population among those responding.

The researchers raised the important question, “Why is minority participation in geography so low?” They concluded that, since there are so few minority students majoring in geography, it is difficult to build a large pool of minority candidates for graduate programs. This situation ultimately translates into a shortage of minority professors as “role models,” which causes even lower minority enrollment in geography. This cycle of “negative causation and cumulative effects” will continue, according to the researchers, until the discipline finds a way to break the cycle (Shrestha & Davis, 1988).

By 2003, this self-defeating cycle had not been broken; thus, the AAG decided to create the Diversity Task Force. This report presents the results of the activities of the

DTF since 2003 and the recommendations which, if implemented, would ideally break the cycle and enhance diversity of faculty and students.

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CHAPTER 2: DIVERSITY ACTIVITIES OF THE TASK FORCE SINCE 2003

Background and Rationale

This and the following chapters of the report document the progress made and the recommendations constructed under the auspices of the AAG Diversity Task Force (DTF), which was created by AAG Council in September 2003. The work of the AAG as a professional association is performed by a number of people, including committee appointees, elected council officials, specialty group leadership, members at large, staff, volunteers, and non-member colleagues, all of whom participate in a variety of both formal and informal capacities and contexts. Task Force members sought to focus the energy (latent, explicit, and potential) found within this set of actors toward the goal of building up diversity within the discipline of geography. The Task Force also drew from and built upon a number of historical efforts to enhance diversity within the discipline that the AAG has undertaken throughout the past half century. Progress on these current activities has been made possible in part by the efforts of these previous pioneers and leaders within the discipline.

We begin by discussing a set of successful ongoing AAG initiatives on diversity that has been implemented by the Task Force during its tenure. The AAG DTF developed a consensus on a focused, selected set of ten “doable” activities that would result in important progress toward the goal of increasing diversity among K-12, undergraduate, graduate students and faculty in the discipline of geography. These action items and their current status are:

1. **To encourage special sessions promoting diversity at the annual AAG**

Meetings (please see following sections for more detail).

2. **To co-sponsor Race, Ethnicity and Place Conferences.** The most recent conference, which was co-sponsored by Binghamton University, Howard University, and AAG, was held on September 16-18, 2004 at Howard University, and the Race, Ethnicity and Place Conference III is scheduled for November 1-4, 2006, at Texas State University. The Race, Ethnicity and Place Conference at Howard University brought together scholars in geography and other disciplines. Using a variety of research approaches, the participants were able to cover the important topics about race and ethnicity and their relationships to particular places, including race/ethnicity and migration, race and ethnic conflict in places of residence, the role of race/ethnicity and place in identity formation, and race/ethnicity and health disparities in neighborhoods. The conference facilitated the publication of a useful text for undergraduate geography students entitled *Race, ethnicity and place in a changing America* (Frazier & Tettey-Fio, 2006).
3. **To develop a strategic relationship with Howard University** in order to increase collaboration with the AAG with a long-term goal of introducing geography programs at Howard University. Two ongoing, notable collaborations include:
 - Project Geo-START, which is funded by NASA, draws upon a partnership with the Capstone Institute at Howard University and will institute an academic-year training program for teachers in the District of Columbia Public Schools. This is a one-year project to develop and test NASA-enriched resources for teachers in secondary schools. The target audience consists of secondary school teachers (grades 7-12) who need professional

resources based on content standards in physical geography, earth science, and math. The next year's goals involve developing print and multimedia units that (a) provide teachers with guidelines for "scaffolding" spatial thinking, (b) draw on NASA remote sensing technology and data, and (c) integrate standards-based content in geography, earth science, and math; testing the resources in teacher-training workshops led by Howard University; and, by the end of the first year, beginning to adapt materials for GIS workshops and earth science careers education.

- Project Geo-START both complements and considerably expands the goals of the AAG's Teacher's Guide to Modern Geography (TGMG) project, which was funded by FIPSE. Whereas the TGMG focuses mainly on social science and human geography, Project GEO-START will build on the work of the TGMG to develop earth science/physical geography education resources that support the key recommendations in a new publication from the National Academies entitled *Learning to think spatially: GIS as a support system in the K-12 curriculum*. The proposed scaffolding will help teachers understand how to teach physical geography and earth science using concepts based in research on spatial cognition and will make clear curricular connections to geography, math, and science standards.

4. **To create an AAG Diversity Clearinghouse**, an online interactive informational service, as part of the AAG's commitment to enhancing diversity within the discipline of geography. With the support of the AAG Council, the DTF, and its

membership, the AAG has established and will continue to develop the Clearinghouse to assist initiatives aimed at expanding opportunities for underrepresented groups to participate in geography education, research, and careers. The clearinghouse is housed at <http://communicate.aag.org/eseries/Diversity/Intro.cfm>. Individuals and departments can use the Clearinghouse to search for information on diversity in geography at all levels of education. Users can also find practical resources, case studies, and model programs that can support local efforts to diversify educational and research programs in geography. The following areas have been the focal point of the collection:

- funding resources for enhancing diversity;
- other resources that can support geography programs, e.g. mentoring programs, recruitment programs, summer workshops, etc.;
- information and publications on success stories, failures, best practices, educational strategies, model programs, university programs and policies, federal policies, etc.;
- statistics, data, and reports on recruitment, retention, and trends regarding minority and underrepresented groups in geography;
- linkages or partnerships with private industry and/or the public sector;
- sample or model proposals; and
- information from other disciplines and university-wide programs on enhancing diversity that could be valuable for geography programs.

The Clearinghouse includes examples from geography departments and projects, but also includes links to programs from outside geography that provide promising methods for enhancing diversity within departments and institutions. One section allows an advanced search to find resources organized by grade-level, audience, program objectives, and other categories. The AAG also invites users to contribute material for possible inclusion in the Clearinghouse through an online, moderated uploading system. As of July 2006, the AAG has, with help from scores of departments and members who have suggested materials for inclusion, populated the database with more than 100 individual targeted resources.

5. **To develop employment/career information and materials to help promote geography to underrepresented groups.** Work is continuing on this goal. The AAG Careers Project, with the support of Geographic Educational National Implementation Project (GENIP), specifically includes the AAG DTF in its implementation plan with respect to activities of both gathering and disseminating information. Content is being developed for the AAG's Careers website. This project dovetails with the Enhancing Departments and Graduate Education in Geography (EDGE) project on which researchers recently completed two surveys that reached hundreds of geography alumni and employer organizations. These surveys provide data on employment trends and workforce development needs in various sectors of the economy. This information will be used to expand the profiles of geographical occupations in the Careers website. When completed, the AAG will begin a dissemination effort with schools, academic departments, and employer organizations. The Community College Affinity Group and GENIP will

support the dissemination phase to maximize outreach to underrepresented groups. In addition, a Careers poster and T-shirt, which draw upon research conducted by minority students at Texas State University studying how and why underrepresented students majoring in geography have chosen their field of study, have been designed. (The poster, which has also been translated into Spanish, is available online at <http://www.aag.org/Careers/your%20mom%20said%202.pdf>).

6. **To conduct a survey on the state of diversity in geography departments.** In October 2004 the DTF conducted the survey consisting of a short questionnaire that gathered data about the current status of diversity in geography departments across North America and their efforts to enhance diversity. Seventy-four departments responded to the survey, representing an estimated 25% response rate. The initial results were published in the June 2005 *AAG Newsletter* (Volume 40, Number 6, pp. 1-5). Catherine Souch, a DTF member, created a global summary and has since done an analysis of the student data. The results have been used in several ways: by the DTF at Healthy Departments workshops and on the Healthy Departments webpage; to inform a discussion at a panel on diversity at the Chicago annual meeting in 2006; and as an informational piece in numerous other venues, including grant proposals, collaboration meetings, outreach exhibits, etc. (See Chapter 3 for a detailed discussion of survey results).
7. **To continue publicity toward promoting diversity in the AAG Newsletter** through news coverage, photos, and research listings. The DTF was to create and publish more AAG member profiles in the newsletter, which are now also available online. See, for example,

<http://www.aag.org/Membership/Profiles/list.cfm>; see also the section of this report on “Diversity Image” for more examples and details.

8. **To explore ways to encourage participation of underrepresented undergraduate groups at the AAG Annual Meeting.** For example, work with entities such as the International Geographical Union (IGU) and the Gamma Theta Upsilon International Geography Honor Society (GTU) to increase outreach to geography undergraduates, and encourage current National Science Foundation (NSF) principal investigators in geography to utilize the Research Experience for Undergraduate (REU) program to supplement their new and existing grants. To improve representation of student populations in enhancing diversity efforts, the Task Force requested that the Council appoint a student member to the DTF (Amanda Coleman) to assist the group in providing ideas and provide a student perspective on topics addressed.

Together with the AAG, the Task Force has succeeded in increasing the participation of underrepresented groups at the AAG meetings. Several undergraduate and graduate students participated in the DTF organized panel sessions held in Denver in 2005 and Chicago in 2006. A number of students from underrepresented populations attended these recent AAG meetings as departmental nominees for reserved positions as Annual Meeting Conference Assistants. Volunteers who donate a minimum of eight hours of volunteer time receive a 50% registration refund and a stipend of \$8.00 per hour worked. In the first year, three students participated in this way; this number increased to seven in the second year. A number of other students from underrepresented groups also

took part in this program, although not formally nominated by their departments for the reserved positions.

9. To identify and develop new and support existing funding proposals that enhance diversity at various “points of intervention” from K-12 through university and career trajectories. Efforts include:

- Obtaining No Child Left Behind (NCLB) funding for minority recruitment at K-12 levels, partnering with the National Council for Geographic Education (NCGE). The Geography Education National Implementation Project (GENIP) has extended an invitation to Carol West and Wade Boykin, Directors of the Capstone Institute at Howard University, for a meeting at the AAG Central Office in September 2006.
- Participating in NSF’s programs, including the Louis Stokes Alliances for Minority Participation (LSAMP), Opportunities for Enhancing Diversity in the Geosciences (OEDG), Alliances for Graduate Education and the Professoriate (AGEP). The AAG recently submitted a proposal, with Howard University’s Orlando Taylor as co-PI, to support Diversification and Capacity Building in the GIS&T Cyberinfrastructure.
- Incorporating elements that analyze and promote diversity in ongoing AAG initiatives, such as the EDGE project that is studying the academic climate from the perspective of gender and diversity. A related initiative, the Geography Faculty Development Alliance, is documenting issues, concerns, and supportive strategies for women and minority faculty, including international faculty, at the beginning of their academic careers.

- Some AAG external grant proposals have received funding. They will enhance diversity at various points of intervention from K-12, to university and beyond (e.g. NASA-funded GeoSTART, FIPSE-funded Teacher's Guide, Careers, EDGE, etc.)

10. To bridge to and help create linkages among the many existing initiatives

ongoing throughout the discipline. The DTF recognizes the need to engage the broader geographic community, including students, scholars, practitioners, and especially departments, with the goals of enhancing diversity within geography, by building upon the work to date of the Task Force and AAG staff. The AAG supports the creation of linkages among initiatives and interested groups within the context of its education, research, and outreach activities. This commitment is demonstrated by the incorporation of the overall goal of enhancing diversity into the existing infrastructure, not simply as a special focus for activities but as an integral aspect of AAG business.

In addition to these ten action items, the DTF took a lead role in encouraging the AAG and Council to create the AAG Enhancing Diversity Award, which recognizes the leadership of geographers who have worked for many years toward enhancing diversity within the discipline. AAG member Jan Monk, with the strong support of the DTF, initiated the idea. This new annual award honors geographers who have pioneered or actively participated in efforts toward encouraging a more diverse discipline over the course of several years, regardless of their current AAG membership status. The AAG recognized Don Deskins and Saul Cohen with the Enhancing Diversity Award at the 2006 Chicago annual meeting.

Don Deskins served as the first Director of the Commission on Geography and Afro-America (COMGA) in 1968. He worked tirelessly to increase the representation of African-American students in geography departments. His efforts resulted in a core of newly trained Black geographers during the decade of the 1970s, in the collection and dissemination of critical information on the status of African Americans in geography, in important liaisons with Black colleges and major universities across the country, in at least one issue in major geography journals devoted to research on Black America, in leadership conferences for faculty from predominantly Black colleges and universities, and many other tangible and intangible benefits from his deep devotion and dedicated leadership in promoting diversity in geography.

Saul Cohen received the award for being one of the strongest and most vocal supporters of the COMGA program. He engaged in numerous activities designed to increase the enrollment of Black students in geography. He advocated for diversifying the discipline, raised funds for diversity activities, and strongly encouraged departments to recruit African-American geography students. He was also a mentor to young students and professionals, helping to establish and grow a new generation of African-American geographers.

Facilitation of Ongoing AAG Initiatives on Diversity

Continuing Work on the Ten Actionable Items

As described in the previous sections, the work of the Task Force during its limited term has successfully addressed its ten specific priority action items and has additionally facilitated and encouraged a number of other related activities. The DTF designed these action items not only to impart tangible short-term impacts but also to be

catalysts toward establishing sustainable changes within the discipline. Of these activities, the following are on-going and will continue to serve as longer term efforts to enhance diversity:

- Special sessions promoting diversity at AAG meetings will continue to be organized by leaders in the effort; these panels provided a valuable forum for reflection and discussion and are expected to continue to take place.
- The Race, Ethnicity and Place Conference will be held biannually, this year in San Marcos, Texas from November 1-4, 2006; the AAG continues to support this event as a conference partner.
- The relationship AAG has forged with Howard University is indeed a long-term friendship; the AAG continues to collaborate in special projects and remains in communication with colleagues at Howard on their long-term goals for geography.
- The AAG will continue to host and maintain the Diversity Clearinghouse on its website as a resource for AAG members; functions that allow users to suggest new materials for inclusion in the clearinghouse will assist in keeping it updated.
- The AAG will continue its program to support underrepresented student participation at its meetings through the Conference Assistants program.
- The AAG has established its Enhancing Diversity Award as an ongoing recognition.

In addition to these activities, the AAG continues to facilitate other ongoing initiatives on diversity through an institutional commitment to enhancing diversity as an integral goal that synergizes and improves its education, research, and outreach initiatives

(i.e. by incorporating diversity activities into proposed external project funding proposals).

The AAG Diversity Task Force in Form and Function

The DTF itself has represented a convergence of a few volunteer leaders with a clear set of focused activities over a limited period of time. In addition to extensive email correspondence, meetings and conference calls were held on October 17, 2003; at the AAG Centennial Meeting in Philadelphia on January 28, 2004; on May 25, 2004; at the Race, Ethnicity and Place Conference at Howard University on September 16, 2004; at the AAG Meeting in Denver on April 8, 2005; on October 2, 2005; and in Chicago at the AAG Annual Meeting on March 9, 2006.

While the form of a Task Force has served as a highly beneficial approach to launch a major focus on diversity issues within the AAG and to accomplish a limited set of action items, it is not an ideal type of mechanism for the long-term goals of enhancing diversity within the discipline as a whole. For this reason, the AAG DTF has discussed a number of alternatives for sustaining this diversity initiative within the AAG far into the 21st century. The most salient of these alternatives, along with its rationale, which represents the DTF consensus recommendation, is presented here for the AAG Council's consideration.

As preface to this recommendation, it is worthwhile and perhaps imperative to reflect briefly about the elements of the DTF experience that contributed to an effective and successful effort. These reflections are summarized in the following points:

- The support, commitment, and involvement of the AAG Council and Executive Committee at the highest levels have been crucial for creating and implementing

the task force. In addition, commitments by the Council to support and facilitate the dedication of AAG staff time to this important effort has been instrumental in moving forward special initiatives and for incorporating the goals related to enhancing diversity within ongoing AAG activities.

- The in-depth involvement, vision, and considerable commitment of AAG Executive Director Douglas Richardson have been essential to moving these action items and larger goals forward.
- The AAG Council has appointed council representatives to the task force to liaison with this important issue and to facilitate communication. Those DTF members who have also served simultaneously on Council are Vicky Lawson, Sam Attoh, and Ines Miyares.
- It was very helpful to the DTF's efforts that the AAG Executive Director and Council have designated Patricia Solis, a member of the AAG Staff, as a liaison to the Task Force. This important liaison is a direct link between the actions of the volunteer group and the ongoing work within AAG.

Task Force recommendation: Create a standing committee on enhancing diversity. While the AAG Council avoids proliferation of extra standing committees, especially if existing groups have charge of an issue, the consensus recommendation of the DTF members is to create a new standing committee committed to enhancing diversity. This new body will involve a redesign of the charge and name of the current Affirmative Action and Minority Status standing committee. The advantages of this approach include the opportunity to circulate “new blood” via a rotating committee and capture enthusiasm of fresh volunteers while maintaining a stable formal framework for

the essential work of enhancing diversity. This new AAG committee on enhancing diversity within the discipline would also link past formal efforts such as those of the AAG Affirmative Action and Minority Status Committee with the more recent work of the DTF. Broadening and updating the current charge of the AAG Affirmative Action and Minority Status Committee would incorporate the lessons learned by the Task Force and update its focus. We also recommend that the number of members be expanded accordingly to account for broader participation of a diverse set of volunteers.

Because many of the recommendations of the Task Force rely upon department chairpersons for leadership with implementation, **it is important to have one or more chairpersons represented on the new standing committee on enhancing diversity.** Others could possibly include members from such particular strategic positions as faculty from community colleges, private and public sector geographers, and students. We further recommend that both an AAG Council member and an AAG Staff member be named to the committee in an ex officio capacity to facilitate communication and ongoing work within the association.

We further advocate that **this new standing committee should continue to assist the AAG in incorporating goals of enhancing diversity within other AAG Standing Committees as appropriate,** and in particular with the AAG Long Range Strategic Planning Committee as it conducts its critical work. The DTF also urges this new standing committee to integrate its work within the structure of AAG Specialty and Affinity Groups, particularly through liaison with the AAG Community College Affinity Group and the Commission on College Geography.

Similarly, we suggest that in order to reach out more effectively to underrepresented student populations, **the new committee on enhancing diversity should collaborate with organizers of AAG regional meetings**, offering younger generations of geographers exposure in person to some well-known geographers who are members from underrepresented groups. The presidents and officers of AAG have, in fact, been quite active in this respect at regional meetings in recent years.

Although significant strides forward have been made to increase diversity within the AAG, the largest professional association of geographers, we recognize that much remains to be done to enhance diversity within the discipline of geography at large, and that this broader effort requires the participation of many outside actors and groups as well. No task force or committee can achieve these goals alone because it takes the whole body of geographers, of whom many have done and continue to do excellent work in this regard.

With this sentiment, we encourage the new standing committee on enhancing diversity to **pay particular attention to the critical role that academic departments of geography play in the health of the discipline**. We also note the importance of minority serving institutions such as tribal colleges, historically Black colleges and universities, Hispanic-serving institutions, community colleges, and commuter colleges. In particular, we reiterate the importance of community colleges and their linkages with the private sector. In this sense, we also recognize that enhancing the visibility of geography as a discipline among underrepresented students is an imperative aspect of enhancing diversity. Geography Awareness Week, during which some departments and programs

hold special events with outreach to local community colleges and high schools, is one such opportunity.

Furthermore, as a continued ongoing effort, it is hoped that **the goal of enhancing diversity is continued to be seen in a broad way**. That is to say, while this Task Force has focused priorities on racial and ethnic diversity, by continuing to address other forms of diversity, such as gender, disability, economic status, etc., it has affirmed the broadest definitions of diversity, seeking ultimately to widen and deepen the outreach of our discipline, to attract and encourage the broadest possible range of students, and to support faculty and professional geographers from every type of background.

Finally, the DTF encourages the new standing committee on enhancing diversity to **build upon the foregoing list of ten actionable items**. This strategy would not necessarily imply an ongoing list of any particular number of activities, but it would indicate an explicit attention to prioritizing actions for each year's work as well as a focus on actions that are "doable" and promise some impact whose success could be measured. The year's priorities would ideally be determined in some coordination among the committee on enhancing diversity, the Council, the Executive Committee, and the AAG Staff through the appropriate representation as noted above. The intent of this recommendation is to maintain the action-oriented spirit of a task force without the ad-hoc temporary status. In sum, the standing committee should continue to implement the work initiated by the DTF in response to the Executive Committee's original charge that is restated here:

The AAG EXECUTIVE COMMITTEE would like the AAG Diversity Task Force to address two areas. Building on past efforts, it should first develop and

help secure funding for a specific proposal or proposals that bridge existing initiatives by AAG members (e.g., the community college partnership program). These initiatives should support the cultivation of new geographers, primarily undergraduates from various minority groups, to begin to enhance the diversity of representation within the discipline of geography. Key elements should include building strategic partnerships with community colleges in high population minority areas and cultivating a stronger geography presence at higher education institutions with traditionally large minority populations. Secondly, the Diversity Task Force should promote greater AAG participation and focus on panels, forums, and workshops that bring greater visibility to the issues and actions that can enhance diversity within the discipline and the Association. The AAG Council will review progress at its council meetings on a regular basis and the Diversity Task Force should submit a progress report to Council prior to each Council meeting. As an ad hoc committee, the Diversity Task Force will have a limited duration.

CHAPTER 3: DIVERSITY CHALLENGES CONFRONTING GEOGRAPHY DEPARTMENTS, PROGRAMS AND STAND-ALONE GEOGRAPHERS

This chapter examines the diversity challenges confronting geography departments and programs. The Diversity Task Force (DTF) explores the demographic composition of the American population and its implications for recruiting minority students, and demonstrates that, at each stage of the educational pipeline, Hispanic and African- American students have fallen increasingly behind white students.

Creating demographically diverse pools of geography students presents both a special challenge and an opportunity for departments. The lack of diversity in geography is discussed in the second part of this chapter, which presents the results of surveys of diversity among doctoral geography Ph.D. recipients and diversity within geography departments.

The Changing Demographics of the United States: Implications for Diversifying Geography Departments

During the past three decades, and particularly in the last ten years, the population of the United States has experienced substantial increase in immigration and diversity. The Hispanic or Latino segment has grown the fastest, rising to 14.4% of the total U.S. population in 2005. The Black or African-American proportion has risen to 12.8%. Asians and Pacific Islanders percentage increased to 4.5%, while Native Americans remained at about 1% (U.S. Census, 2006).

Despite these increases of the U.S. minority populations, increases of racial and ethnic minorities in institutions of higher education have not kept pace. The demographic representation of racial and ethnic minorities in colleges and universities is much lower

than the general U.S. population. The disparity between each group's college attendance and its representation in the general population is greater for African Americans, Hispanics, and Native Americans. In 2000, African Americans comprised 12% of the population, but received only 9% of the undergraduate degrees and just 6% of the doctorates. That same year, 12.6% of the population was Hispanic, yet Latinos received only 6.3% of the undergraduate degrees and 3.8% of the doctorates (Levine, Rodriguez, Howery, & Latoni-Rodriguez, 2002).

Recruitment of minorities should be facilitated by the fact that the U.S. economy is rewarding college graduates at higher rates than ever before. The median earnings (in constant 2001 dollars) for workers with a bachelor's degree or higher rose substantially between 1975 and 2001 (Kelley, 2005). Workers with a high school diploma, however, experienced no real increase in income.

Because of the lack of educational attainment of racial and ethnic minorities, the U.S. no longer leads the world in the percentage of its population with college degrees (Kelley, 2005). Instead, the U.S. ranks fifth in the percentage of its younger population (aged 25-34) with college degrees. Between 1990 and 2000, Hispanics, African Americans, and Native Americans made the least progress in achieving success in higher education. In fact, the gap between their attainment of higher-education degrees and that of whites widened. Moreover, the representation of whites increased from high school graduation to receipt of the bachelor's degree, while the representation of Blacks and Hispanics decreased over the same educational cycle. Table 1 shows that, at each stage of the educational pipeline, whites and Asians represent larger proportions of those who participate in and complete higher education, while Hispanics and African Americans

continue to fall behind (Kelley, 2005). These trends have implications for recruiting and maintaining a diverse demographic pool throughout the pipeline. Table 2 shows the percentages of students by race/ethnicity as they transition from high school to the receipt of a bachelor's degree. The percentages of Black and Hispanic students who graduate from high school on time, go directly to college, and graduate with an associate or bachelor's degree are significantly lower than that of whites. The gaps between minority and white students are even greater at the Ph.D. level.

The social sciences specifically have likewise struggled to diversify their disciplines as reflected in the proportions of African Americans and Latinos in professional social science associations. In 2002, for example, 5.6% of the members of the American Sociological Association were African American, and 3.9% were Latino. Although far below percentages for African Americans and Latinos in the general U.S. population, these were the highest proportions for both minority groups in the five sampled social science disciplines (probably because of the success of sociology's MOST program). The American Political Science Association was 3% African American and 2.5% Latino in 2002; the American Psychology Association was 1.5% African American and 1.9% Latino; the Association of American Geographers was 1.2% African American and 1.3% Latino; and the American Anthropological Association in 1999 (no data available for 2002) was 1% African American and 2% Latino (Montalvo, 2004). These data clearly show that there is a great deal of work to do in the social sciences to bring the percentages of African Americans and Latinos in each discipline to the national averages of the general population. Geography indeed faces a daunting task.

Surveys and Discussions of Diversity Related to Geography

This section presents the results of quantitative surveys of geography departments and qualitative information from three panel sessions of African-American and Latino high school and university students at recent professional conferences. These surveys and discussions demonstrate a lack of diversity and the challenges of diversifying geography departments.

Summary Results from the National Opinion Research Center

The first survey, which is conducted annually by the National Opinion Research Center, summarizes the results of diversity among doctoral geography Ph.D. recipients. There are 71 graduate departments of geography in the United States that offer Ph.D. degrees (AAG, 2006). In 2004, of the 144 Ph.D. degrees awarded in geography to American citizens and non-U.S. permanent residents, only 1 (0.69%) was awarded to a Native American. Asian Americans were awarded 4 (2.8%) and 3 (2.1%) of Ph.D. degrees were awarded to Blacks and Hispanics respectively. Whites, on the other hand, were awarded 124, or 86%, of the doctorate degrees. This pattern of Ph.D. degrees awarded is also related to the median number of years each racial/ethnic group takes to complete doctoral degrees. The median number of years Asian-American students took to complete their doctorates was 7.2, Black students took 9 years, Hispanic students took 8 years, and Native Americans students took 8.9 years, while the median number of years for white students was 7.9 (Hoffer et.al, 2005).

Table 1: Race/Ethnic Percentage Representation at Each Stage of Education in 2002

	18 Year olds	High School Graduates	First Time Freshmen	All other Undergraduates	Associate Degree Awarded	Bachelor Degree Awarded
White	63	69	68	67	70	74
Black	14	13	14	12	11	9
Hispanic	16	12	10	11	10	6
Native American	1	1	1	1	1	1
Asian American	4	5	6	7	5	6

Source: U.S. Bureau of the Census; National Center for Education Statistics

Table 2: Transition Completion Measures from High School to College

Group	Graduate from High School on Time (2001)	Recent High School Graduates that Go Directly to College (2001)	3-Year Graduation Rates for Associate Students (2002)	6-year Graduation Rates for Bachelor's Students (2002)
White	74.6	64.2	30.7	57.1
Black	49.4	54.6	23.0	38.1
Hispanic	52.6	51.7	26.6	44.7

Source: National Center for Education Statistics

Whether racial differences in sources of financial support are the primary reason for the disparity is not clear. The percentage of Asians, Blacks, and Hispanics relying on their own resources is similar to the percentage of white students, whereas Native Americans are 1.5 times more likely to rely on their own resources than white students (61% vs. 39%). Asian, Black, and Hispanic students, however, are less likely than white students to receive teaching assistantships, and Black and Hispanic students are also less likely than white students to be awarded research assistantships/traineeships. On the other hand, Blacks, Hispanics, Asians, and Native Americans receive a disproportionately larger share of fellowships/dissertation grants as compared to white students. Indeed, Black students are almost twice as likely as white students to receive fellowships or dissertation grants as their primary source of financial support (Hoffer et.al. 2005: 60) (Table 3).

The extent of racial/ethnic differences in primary sources of support is demonstrated by the index of dissimilarity. The index ranges from “0” (no racial difference) to “100” (total racial difference) in primary sources of support. The difference between Blacks and whites is 20.1 (the greatest) and 14.1 between Asians and whites (the least). The difference between Hispanics and whites is 15.4. The primary source of support impacts a student’s future financial situation. After receiving a doctorate degree, there are clear racial/ethnic differences in the levels of debt greater than \$30,000. In the social sciences, including geography, the percentage of students with debt greater than \$30,000 in 2004 was 25% for Asian students, 31% for whites, 42% for Native Americans, 43% for Hispanics, and 45% for Black students (Hoffer et. al, 2005). The outcomes from these

disparities obviously favor some groups of students over others in the current higher education system.

Table 3: Differences in Primary Sources of Financial Support for Doctorate Recipients by Race/Ethnicity*, 2004

Primary Source of Support in Social Sciences	Asian	Black	Hispanic	Native American**	White
Teaching Assistantships	17.3	8.4	12.5	-	20.8
Research Assistantships/Traineeships	16.6	9.6	10.9	-	16.3
Fellowships/Dissertation grants	33.9	42.1	37.4	27.8	21.7
Own Resources	28.5	37.8	37.7	61.1	39.1
Other	3.6	1.9	0.0	-	2.0

Source: Computed by the authors from data obtained from Hoffer, et.al. 2005

*Includes U.S. Citizens and Permanent Residents only.

-Data suppressed to protect confidentiality

** Index of dissimilarity could not be computed due to suppression of data.

Summary Results of AAG Diversity Task Force Survey

To assess the demographic composition of students and faculty in geography departments, the DTF conducted a survey in 2004. The results of the survey are summarized here. The results are based on 74 respondents (12 private colleges and 62 public). The departments represented a variety of institutional types, including community colleges, commuter research, liberal arts residential, and residential research. The mission of 62% of the responding departments was “equally research and teaching.” The institutions ranged in size from 1,000 to more than 50,000 students. A third of the departments offered Ph.D.s, and one-fourth offered master’s degrees. Ninety-five percent of the responding departments offered at least one degree in geography, and 27% offered a degree in GIS. No responding department offered degrees in either women’s studies or ethnic studies.

Except for Asians, who constituted 7% of the faculty, only a small percentage of the total faculty in the responding departments was minority faculty. Only 3.6% of the total faculty was Black, 1% was Hispanic, and 0.2% was Native American (Table 4). The percentage of white faculty by rank increased and the percentage of minority faculty decreased from assistant to full professor (Table 5). The responding geography departments are more diverse by gender, with women representing 27% of the geography faculty (Table 6). Similar to the pattern among racial minorities, however, the percentage of males increased at each rank from assistant to full professor, while the percentage of women decreased (Table 7). Of the total departments responding, 49 departments had no Black faculty, 61 had no Hispanics, 31 had no Asian faculty and 70 had no Native American faculty. On the other hand, only 3 departments had no women faculty. Racial

minority faculty appears to be more concentrated within fewer departments than women faculty. For example, based on a survey conducted from October to December of 2002, the 44 Black geography faculty persons were located in 34 departments, and 7 departments had more than 1 Black geographer (Darden and Terra, 2003).

Student Body Composition

Of the 74 departments that responded to the DTF survey, 66 provided information on the number of students and their race/ethnicity (Tables 8 and 9). In terms of white, non-Hispanic undergraduate students, males outnumbered female undergraduates by a factor of 1.8. Minority student numbers are small (Table 8), both in absolute and relative terms, but the number of male and female Black, non-Hispanic, Hispanic and Asian undergraduates are approximately equal. The number of Native American male undergraduates exceeds Native American female undergraduates by a factor of 1.8. The percent of Black undergraduates (3.2%; Table 8) is less than that of the faculty (3.6%; Table 4), while the percent of Hispanic undergraduates is much higher than the percent of faculty (6% compared to 1.1%).

Table 4: Faculty Composition of Geography Departments by Race/Ethnicity in 2004*

	Number	Percent of Total
White, non-Hispanic	720	88.0
Black, non-Hispanic	29	3.6
Hispanic	9	1.1
Asian	58	7.1
Native American	2	0.2
Total	818	100

Faculty includes tenure-track or tenured faculty.

Source: Diversity Task Force Survey of Racial, Ethnic and Gender Diversity in Geography Departments and Higher Education Institutions, 2004

*Based on 74 responding geography departments

Table 5: Percent of Total Distribution by Academic Rank in Geography Departments by Race/Ethnicity, 2004*

Race	Assistant Professor	Associate Professor	Full Professor, Named Chair/University Professor
White, non-Hispanic	84.5	87.7	91.2
Black, non-Hispanic	3.8	5.1	2.2
Hispanic	1.1	1.3	0.9
Asian	10.6	5.5	5.4
Native American	0	0.4	0.3
Total	100	100	100

Faculty includes tenure-track or tenured faculty.

Source: Diversity Task Force Survey of Racial, Ethnic and Gender Diversity in Geography Departments and Higher Education Institutions, 2004

*Based on 74 responding geography departments

Table 6: Faculty Composition of Geography Departments by Gender, 2004*

	Number	Percent of Total
Males	600	73.4
Females	217	26.6
Total	817	100

Faculty includes tenure-track or tenured faculty.

Source: Diversity Task Force Survey of Racial, Ethnic and Gender Diversity in

Geography Departments and Higher Education Institutions, 2004

*Based on 74 responding geography departments

Table 7: Percent of Total Distribution by Academic Rank in Geography Departments by Gender, 2004*

	Assistant Professors	Associate Professor	Full Professor, Named Chair, or University Professor
Males	57.8	76.0	85.0
Females	42.2	24.0	15.0
Total	100	100	100

Faculty includes tenure-track or tenured faculty.

Source: Diversity Task Force Survey of Racial, Ethnic and Gender Diversity in Geography Departments and Higher Education Institutions, 2004

*Based on 74 responding geography departments

Table 8: Undergraduate Student Composition of Geography Departments by
Race/Ethnicity in 2004*

	Number	Percentages
White	4145	85.6
Black, non-Hispanic	157	3.2
Hispanic	289	6.0
Asian	225	4.6
Native American	28	0.6
Total	4844	100

Source: Diversity Task Force Survey of Racial, Ethnic and Gender Diversity in Geography
Departments and Higher Education Institutions, 2004.

*Based on 66 geography departments that provided such data.

In terms of the distributions of these underrepresented students in geography departments, 29 departments (44%) had at least one Black male undergraduate. However, 37 departments (66%) had none. Only one department had more than 10 Black male undergraduate students (11), and in 15 of the 29 departments with Black male students, only one student was a geography major. Black female undergraduates were present in a smaller number of departments (22, or 33%). One department had more than 30 Black female undergraduate students; the remainder had six or less. Ten of the 22 departments had only 1 Black female undergraduate student.

Twenty of the 66 departments reported Hispanic male undergraduates, while 25 had Hispanic female undergraduates. More than 40 female Hispanic undergraduates (almost a third of all the reporting departments) were studying in one department. Nine departments had at least one Native American male undergraduate, and 8 had at least one Native American female undergraduate. These departments had only 1 or 2 students, although one department had 4 Native American male undergraduate students.

Overall, Black male undergraduates were found in more departments than Hispanic or Native American male students. However, it is much more likely that there was only one Black male undergraduate student in a department. The numbers of minority female students, Black or Hispanic, were about the same. Given that they were more evenly spread across departments, it is equally likely for departments to only have had one Black or Hispanic female undergraduate in a department, although some departments had notable concentrations.

Graduates

In aggregate, 3.2% of graduate students in the reporting geography departments were Black, which is the same proportion as for Black undergraduates (Table 9) but less than the 3.6% for Black faculty (Table 4). Hispanics comprised 4.2% of the departments' graduate students, compared to 6% for undergraduates; yet the percentage was substantially higher than the 1.1% tenure-line Hispanic faculty. The proportion of Asian graduate students was about the same as undergraduates, but the number of Native-American graduate students was lower than that of undergraduates.

There were fewer departments with minority graduate students than with minority undergraduates. Only 15 departments had Black male graduate students. Twelve of these departments had only 1, but one had 7. Only 8 responding departments recorded Black female graduate students, yet one department had 7. Thirteen departments had Hispanic male graduate students, while 12 departments had Hispanic female graduate students. Only 2 departments had male Native- American graduate students. No responding departments had female Native American graduate students.

Funding

In the departments reporting, Black male graduate students had teaching assistantships in 10 departments; 3 departments listed one Black male graduate student as having a fellowship. Hispanic male graduate students had teaching assistantships in 11 departments, and 1 department was supporting 4 Hispanic male students with teaching assistantships. Department fellowships supported 2 Hispanic male graduate students. Two male Native American graduate students were supported by department teaching assistantships.

Table 9: Graduate Student Composition of Geography Departments by Race/Ethnicity in
2004*

	Number	Percentages
White	1220	87.6
Black, non-Hispanic	45	3.2
Hispanic	58	4.2
Asian	67	4.8
Native American	2	0.2
Total	1392	100

Source: Diversity Task Force Survey of Racial, Ethnic and Gender Diversity in Geography
Departments and Higher Education Institutions, 2004

*Based on the 66 geography departments that provided such data.

Black female graduate students had teaching assistantships in 7 departments; one department was supporting a Black female graduate student on a fellowship. Hispanic female graduate students had teaching assistantships in seven departments, while overall three Hispanic female graduate students had fellowships.

Recruitment Activities: Undergraduate Majors

According to the survey responses, most geography departments recruit undergraduate majors through the following:

1. general education introductory human or physical geography courses;
2. major or career fairs;
3. the reputation of GIS job potential; and
4. referrals from other students.

Very few departments indicated that they recruited undergraduate majors through course offerings on ethnicity/race or course offerings on gender and geography. Similarly, few departments recruited majors through recruitment partnerships with community colleges, high schools, and programs in education. Moreover, none of the geography departments recruited undergraduate majors from partnerships with historically Black colleges and universities or Hispanic-serving institutions.

Recruitment Activities: Minority Students

Twenty-two, or 30%, of the departments responding said they make special efforts to recruit and attract Black, Hispanic, and Asian students. Such efforts have included the following:

1. making links with campus minority recruitment offices;
2. mailing posters to historically Black colleges;

3. participating in an outreach program to inner city high schools;
4. personalized contact;
5. agreements with community colleges;
6. statements in the department's literature that encourage minority students to apply;
7. summer institutes focusing on minorities;
8. use of the GRE minority locator service;
9. signing a "Direct Action Now Pledge" to admit and fund at least one racial minority graduate student per year;
10. creating an agreement with the five historically Black institutions offering degrees in geography; and
11. offering courses that address issues of race and ethnicity.

Support for minority students has included mentoring, McNair Scholars program, and minority fellowships (Table 10).

Recruitment Activities: Women Students

Fourteen, or 19% of the departments responding, said they make special efforts to recruit women students. The most common efforts have included the following:

1. using women advisors as role models;
2. organizing panel discussions on "Women in Geography";
3. organizing major/career fairs for female students only;
4. making statements in departmental literature that encourage women students to apply;
5. advertising the geography programs through campus Women's Centers; and

6. emphasizing the presence of women on the departmental faculty.

Recruitment Activities: Minority Faculty

Among the departments responding, 62% said they make special efforts to recruit Black, Hispanic, and Asian faculty. The most common efforts have included the following:

1. advertising in AAG newsletters and minority oriented list-servs and media;
2. contacting Black colleges and universities;
3. requiring that all interview recruitment pools contain one minority candidate;
4. following normal university procedures on recruitment of diverse faculty;
5. making statements in position announcements encouraging minorities to apply; and
6. using funds provided by senior administrators for minority faculty hires.

Table 10: Support for Minority Students:

Support by Type	Percentage of Departments Responding Affirmatively*
Mentoring	32
McNair Scholars Program	20
Minority Fellowships/Scholarships	18
Internships (specifically for minority students)	3
Research Assistantships (specifically for minority students)	3

Source: Diversity Task Force Survey of Racial, Ethnic and Gender Diversity in Geography Departments and Higher Education Institutions, 2004

*Based on the 66 geography departments that provided such data

Recruitment Activities: Women Faculty

Among the departments responding, 66% said they made a special effort to recruit women faculty. The most common efforts have included the following:

1. advertising in AAG newsletters, list-servs and faculty women interest groups;
2. working with women colleges and universities;
3. following normal university procedures on recruiting a diverse faculty;
4. making statements in position announcements that encourage women to apply;
5. targeting women geographers and encouraging them to apply; and
6. sending letters to all women doctoral candidates prior to faculty searches.

Improving the Campus Climate for Minorities and Women

Several departments listed what they were doing to improve the campus climate for minorities and women. The most common activities included

1. mentoring,
2. supporting campus speakers' seminars that discuss issues on diversity,
3. providing support for university administered centers for women and minorities to facilitate their success while at the university,
4. working very closely with the university's offices and staff that are engaged in improving the climate for minorities and women,
5. promoting diversity in the curriculum, and
6. engaging in diversity training for all staff and faculty.

The Greatest Challenge or Obstacle in Recruiting and/or Retaining Minority Students in Geography

Respondents indicated that the greatest challenges in recruiting and/or retaining minority students were

1. their geographic location in an overwhelmingly white rural or suburban area,
2. the higher percentage of minority students (compared to non-minority students) admitted to the university who are not academically prepared for university course work,
3. the overall lack of diversity at the university as a whole,
4. a lack of interest in geography by minority students compared to non-minority students, and
5. convincing minority students and their parents that geography is a degree that can lead to a good job or career.

Summary Results of Student Panel Sessions

The summary of the student panel sessions is as reported in the *Journal of Geography* (see Estaville, Brown, & Caldwell, 2006):

In three recent panel sessions at state, regional, and national professional conferences, African-American and Latino university and high school students from across the nation discussed pursuing college degrees in geography (SWAAG 2004; GeoTech 2005; AAG 2005).

These panel discussions underscored that African-American and Latino students face the same fundamental questions as the larger population: What is geography about and how can it lead to professional

careers? Their parents, too, want well-paying, satisfying jobs for their children. The African-American and Latino students suggested that geography departments should highlight much more the successful careers and accomplishments of their graduates, particularly those from underrepresented groups, to help parents know about financially rewarding professional careers that geography degrees can provide. Some Latino students also recommended departments construct their websites in both English and Spanish, principally in states with rapidly increasing Latino populations, like California, Texas, New Mexico, and Arizona, which could empathetically facilitate in attracting Latino students to geography.

The African-American and Latino student panelists also expressed concern about 1) not having geography faculty with similar racial and ethnic backgrounds who could become role models and mentors for them, 2) some faculty who are not as sensitive to minority cultural heritages as they could be, and 3) the lack of vital campus support systems for students from underrepresented groups, especially those who are the first in their families to attend college. The African-American and Latino students also emphasized the importance of department websites in portraying a feeling of community and belonging, and the students lamented the paucity of robust financial assistance programs for students from low-income families (Estaville, Brown, & Caldwell, 2006, 11).

Conclusions

This chapter has provided data that help expose the nature of the challenges facing geography departments as they work to create more diversified faculty and student bodies. Although the demographics of the country are rapidly becoming more diverse, the expected greater diversity in institutions of higher education has been slower to materialize, especially for Blacks and Hispanics. African-American and Latino students (and their parents) want to achieve the same goals and successes that the discipline of geography can provide for students of the larger population—satisfying, well-paying professional careers.

Surveys of geography departments indicate the severe under-representation of racial and ethnic minorities in their faculty and student populations (Table 11). At the doctoral and faculty level, the populations of racial and ethnic minorities are extremely small, presenting an even more difficult recruitment challenge to geography departments. However, there are opportunities for department chairs and their faculties to intervene at each entrance point (high school to graduate school to faculty appointment). The recommendations in Chapter 4 of this report explain how intervention can take place.

Table 11
The Diversity Challenge: The Shrinking Diverse Pool

A. High School Graduate

↓ → Point of intervention

B. Entrance into University/College at Large

↓ → Point of intervention

C. Undergraduate Geography Majors

↓

D. College/University Graduates

↓ → Point of intervention

E. Entrance to Graduate School in Geography

↓

F. Masters Degree in Geography

↓ → Point of intervention

G. Entrance to Ph.D. Program in Geography

↓

H. Graduates with Ph.D.

↓ → Point of intervention

I. Faculty Appointment in Geography Department

Note: Points A-I are parts of a mutually reinforcing system to insure continuous diversity.

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**CHAPTER 4: GEOGRAPHY DEPARTMENTS AS AGENTS OF CHANGE:
RECOMMENDATIONS FOR OVERCOMING THE CHALLENGES THROUGH
ACTION**

The Intent of the Recommendations

The AAG DTF has designed the recommendations in this report to “break the cycle” of under-representation of minority racial and ethnic groups in geography departments in the U.S. and to create and sustain inclusive, supportive, diverse departments. These recommendations focus on *action* and, unlike many recommendations made in previous reports on diversity in geography which looked to the AAG for action, this report focuses on geography departments as the primary agents of change. All geography faculty persons should be involved in diversity efforts. Thus, the Task Force strongly encourages department chairpersons to build consensus for *action* to engage in work for positive change.

It is essential that the chairperson or head of the department expand her or his role as a “doer” and facilitator and support diversity activities that may originate from faculty and/or students in the department. The objective is to support a broad commitment for diversity and change throughout a department. Thus, the Task Force encourages departments to view diversity as broad and inclusive, including both race/ethnicity issues and other aspects of diversity, such as gender, disabilities, and sexual orientation. The overriding objective is to **create and sustain a supportive, inclusive climate that is conducive to learning.**

The recommendations in this report were strongly influenced not only by the charge of the AAG council and the serious lack of diversity in geography departments, but also

by the Minority Opportunities through School Transformations (MOST) program. The American Sociological Association conceived MOST with the intention of finding ways to alter “business as usual” practices at colleges and universities. According to data presented in the MOST report (Levine, Rodriguez, Howery and Latoni-Rodriguez, 2002), the MOST program significantly increased diversity among students and faculty and transformed the curriculum and climate in sociology departments at participating institutions.

The primary reason for the program’s success is that MOST focused on the academic *department* as the instrument of systemic, institutional change. Departments have the capacity to initiate recruitment activities and programs, make curriculum changes and choices about mentoring, and provide other support. MOST considered the departments to be the strategic location of change in higher education. The results of the project supported that view. Measurable change occurred.

From the very outset the AAG DTF has had “measurable change” as its main goal. By following the approach of the department as the agent of change, the Task Force believes that “measurable change” can best be achieved. Measurable change has four steps:

1. conducting an assessment of the state of diversity in the department;
2. adopting recommendations for change;
3. taking *action* to implement the recommendations; and
4. evaluating the impact of the implemented recommendations through quantitative and qualitative measures.

The recommendations that follow are designed to satisfy the goals of the AAG DTF. Their focus is on the department. The geography department is critical to achieving diversity in all areas: recruitment, mentoring and financial support, curriculum, climate, retention, and placement. The DTF recommends that the newly created standing committee on enhancing diversity work with chairpersons and develop instruments for measuring outcomes related to improving diversity.

Recruitment: Undergraduate Students

Recommendation 1 and rationale. The department chair or her/his representative is the best ambassador to participate in outreach and sell geography to a diverse population. Thus, the chair should lead the department to develop a recruitment plan with these action items:

1. **Hold a series of discussions** with faculty and staff about the need to increase or maintain the diversity of the student body.
2. **Develop a comprehensive database** to help guide discussions and inform decisions about student recruitment and retention. Database development must include the determination of benchmarks against which to measure progress.
3. **Write a statement of diversity goals** and target dates for achieving the goals.
4. **Identify target schools and community colleges** with the demographic characteristics and types of course offerings for the purpose of recruitment.
5. **Develop partnerships** with teachers in the public and private schools and educate the guidance counselors and university professional staff recruiters (for more discussion of recruitment strategies, see Estaville, Brown, & Caldwell, 2006).

6. **Establish formal collaborative agreements** with selected schools and community colleges related to recruitment.
7. **Identify financial resources** within the department, the college, the university, and externally to assist with diversity goals.
8. **Conduct annual reviews** of progress towards achieving diversity goals.
9. **Send results of progress reports** to the dean, provost, and other interested units within the university and request joint support from such units where appropriate.
10. **Monitor the departmental climate**, address any issues quickly and modify the climate to accommodate a changed environment. Over time any changes from less to more diverse should become the norm. Measure progress on at least an annual basis.

Recommendation 2 and rationale. In recruiting undergraduate students to geography, departments in states with the largest percentage of racial minorities should take the lead and serve as role models. Research has demonstrated that these states are more likely to adopt policies that help minorities enter and complete college (American Education Research Center, 2006). Therefore, geography departments should take a geographic approach in recruiting minority students. Most students (minority and non-minority) attend a higher educational institution close to home (Kelley, 2005). This distance-decay factor is especially true for Hispanic and non-traditional students. The difficulty of recruiting minority students thus increases with distance from their homes, and this distance-decay factor should be taken into account in department recruitment plans.

Recommendation 3 and rationale. Departments should establish summer workshops and research opportunities with a focus on geography and/or GIS to educate teachers,

especially minority teachers, who teach in schools that have students from predominantly underrepresented groups.

Recommendation 4 and rationale. Departments should provide mentoring opportunities for students. The faculty, with the leadership of the chair, should establish a mentoring program that enhances intellectual and social skills of students, particularly minority students who may have fewer campus support systems. The department chair should ensure that both minority and non-minority students equally have the opportunity to get as much research training as possible via a connection with professors who serve as research mentors.

Recommendation 5 and rationale. The department faculty, with the support of the chairperson, should engage in outreach and collaboration in support of geography. The department should establish a program that involves collaboration with geography departments and programs at historically Black colleges and universities, Hispanic and Native American serving institutions, community colleges, and commuter colleges.

Recruitment: Graduate Students

Each Ph.D.-granting geography department should develop a recruitment program with the agenda to recruit and fund annually (via a graduate assistantship or a fellowship) at least one minority student (African American, Asian American, Native American, or Hispanic American). The commitment of financial support should be for the number of years from the completion of the baccalaureate to completion of the doctorate.

Departments can take advantage of a number of prospect databases, such as the GRE database and McNair database, to target and recruit outstanding minority students for their graduate programs.

Recruitment: Minority and Women Faculty

Departments should establish a policy that clearly details the importance of diversity in the search process for faculty positions. Faculty search committees must be as diverse as possible and the final pool for interviews must also be as diverse as possible.

Curriculum

Departments should review their curricula to determine the degree of commitment to diversity and, if necessary, create courses that make the curricula more relevant to today's racially diverse society. Courses that address certain areas may be needed, for example:

- Race and space in the maintenance of structures of domination, subordination, and inequality
- Intersectionality and space (i.e. the intersection of race, class, gender, sexuality)
- The ideology of white supremacy and the use of space to maintain it
- The spatialities of white privilege
- Racial residential segregation and racial inequality: The causes and consequences
- The ghetto, barrio and ethnic enclave: Their origin, persistence, and consequences
- The racialization of immigrants of color
- Environmental racism
- Critical race theory
- Space- and- race-based public policies
- Race, concentrated poverty and economic restructuring

Many of the courses presented here are the result of an NSF sponsored workshop on “Race and Geography” held in 1998 at the University of Kentucky. The courses can serve

as examples for those departments that wish to further diversify their curricula. Many voices at the workshop expressed the view that unless geography departments demonstrate that they can implement curricular changes that provide non-whites with courses that are truly useful to understanding their position in the world as well as providing the empirical and theoretical tools that allow them to reconstruct a liberated identity, the discipline of geography will remain less progressive than other disciplines in the area of diversity (see Thomas, 1998).

Climate

Chairpersons, with the cooperation of faculty, students, and staff, should regularly assess the climate in their department to ensure that it is free as possible of tensions and hostility and that it fosters a healthy and constructive environment for all students and faculty (Levine, Rodriguez, Howery and Latoni-Rodriguez, 2002).

Recommendation 6 and rationale. Departments must construct websites that clearly demonstrate an unwavering commitment to diversity. These "24/7" electronic department personalities must radiate through visual, audio, and text the feelings of welcoming and warmth and a sense of "I would like to be a part of this Geography Family" to all groups of people. To assist geography departments in conveying this unyielding dedication to diversity to students and their parents, the AAG must restructure its website to provide a more visible allegiance to diversity, perhaps by placing photos of diverse groups of geographers conducting their work on each of its webpage banners. Such a digital partnership among geography departments and the AAG Central Office will win enormous returns in promoting diversity throughout the discipline and around the world via the Internet.

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APPENDIX: MODELS OF DIVERSITY PROGRAMS THAT RESULTED IN MEASURABLE CHANGE

The following pages contain very brief descriptions of a select few model programs in geography and other disciplines that may be adapted in order to enhance diversity in geography. Together, they span the educational spectrum from elementary and secondary to undergraduate and graduate efforts. Many of them have received funding and/or recognition from the National Science Foundation as tribute to their effectiveness. A larger number of examples may be found in the AAG Diversity Clearinghouse online.

Elementary/Secondary Levels

The Albatross Project

<http://www.wfu.edu/albatross>

LESSON: Real scientific projects go beyond "cookbook curriculum" and engage students in the unknown. Underrepresented students thrive with hands-on pedagogical approaches.

One way to achieve the integration of education and science and to encourage underrepresented groups to pursue careers as scientists is to provide students at a very early stage with real data and information on how to go about interpreting them, and then let the kids go. It's a step beyond "cookbook" science, which provides experiments with known outcomes. Unlike what they get with a standard experiment book, these students don't know what will happen. No one does. That's what makes it exciting.

Programs like the Albatross Project inspire underrepresented students by engaging them in real scientific projects. Their experience encourages some of them to go on and study more science.

"What I want to accomplish is a way for children, especially minorities and girls, to provide their own role model for scientists," explains Dave Anderson, head of the Albatross Project and a professor of biology at Wake Forest University in North Carolina. "They are doing science every day. And we [the PhDs] weren't doing anything different than they were."

Albatrosses are sizable birds. They can weigh up to 10 kilograms (22 pounds) and are among the world's largest flying birds. Besides their size, albatrosses are known for their long-distance journeys. They can fly thousands of miles without landing. The Albatross Project monitored the birds as they nested, raised their young and found feeding grounds. For the project, albatrosses that nested in Hawaii were fitted with tiny radio transmitters. Satellites then collected the data showing each bird's longitude and latitude at any given moment.

Although it only ran for three years, the Albatross Project involved 20,000 children across the globe and received rave reviews from teachers and students alike. The project's success is partly due to its remarkably uncomplicated data, involving just longitude and latitude and time. As a result, the students were as much involved as the adult researchers, particularly at the moment when the transmitters started to answer one of scientists' basic questions about albatrosses: where do they eat?

Albatrosses studied in the project are native to Hawaii, but researchers knew they didn't eat there during nesting season. So where did the birds go for food? Kids from all

over the country, some of whom had never seen an ocean, were able to watch "their" albatrosses fly away from Hawaii to eat.

In fact the birds flew about 4,500 kilometers (3,000 miles), or half way across the Pacific Ocean to the California coast, where they ate, rested and flew back. "No one knew that would happen," Anderson says, still sounding amazed at the length of the flight. "Researchers learned about it at the same time as the students."

And for Michelle Bergey, a third-grade teacher in California, it is this immediacy that sells the project. "This project has given the students something real to apply their knowledge to and inspired them to learn more about the world around them," she wrote in an e-mail to Anderson. "We have integrated biology, geography, oceanography, language arts, current events and math while following The Albatross Project, not to mention technology. There are 30 seven-to-10-year-olds here who know they can be scientists someday."

(Adapted from http://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=100732.)

Community Colleges Alliance

The GEODIVERSITY Project

<http://www.csulb.edu/depts/geography/gdep/>

LESSON: Students who are in community/ two-year colleges or are about to enter such institutions are usually quite diverse in terms of age, financial situation and ethnic background. For these reasons and more, models that focus on community colleges and/or alliances with them are particularly valuable for efforts to enhance diversity.

Students who are in community/ two-year colleges or are about to enter such institutions are usually quite diverse in terms of age, financial situation and ethnic

background. There are over 1,100 Community colleges in the USA, and an NSF survey in the year 2000 found that 44% of all Bachelors and Masters Degree recipients had studies in a Community College.

Low tuition costs are one of the most important factors for community college students, and as a result ethnic “minorities” are over-represented. This is particularly evident in the state of California, where one-third of community college students are Hispanic-serving institutions. The age of these students is generally higher than at a 4 year or higher institution. Financial situation data is not easily available, but it is well known that many CC students come from low-income families, including families whose income is below the poverty line.

For these reasons and more, models that focus on community colleges and/or alliances with them are particularly valuable for efforts to enhance diversity. The CSULB departments of Geological Sciences, Geography, and Anthropology were granted funding from the National Science Foundation to create the GEODIVERSITY Project, an innovative collaborative partnership with several community colleges and local high schools to improve the research and educational experiences of underrepresented students in the geoscience disciplines (geology, physical geography, archaeology, and environmental science). The goals of G-DEP were to:

1. increase the number of underrepresented students who have a broad educational and research experience in the geosciences;
2. enhance the quantity and quality of geoscience research and teaching by faculty members from CSULB, community colleges, and high schools;

3. increase community college and high school students' awareness of the geosciences and their associated research careers and educational requirements;
4. enable a smooth transition of underrepresented students from community colleges and local high schools into advanced undergraduate study in the geosciences; and
5. increase the number of geoscience majors who are retained in their disciplines.

Community college and high school science faculty were invited to California State University in Long Beach for professional activities with geography and other geoscience colleagues under the GEODIVERSITY project. Both the faculty and their students collaborated with CSULB G-DEP faculty on geoscience research projects during an eight-week summer field and lab program and throughout the academic year in research design, data analysis, and presentation.

Students engaged in data collection and interpretation, conducting web-based geoscience research, and learning safe procedures for the lab and field. The experience culminated in presentations at professional conferences in the geosciences, team-authored publications¹ and presentations in the student participants' own schools.

CSULB geoscience majors served as peer mentors for lower division students who were interested in majoring in the geosciences. Underrepresented students in the lower division science courses were invited to geoscience department open houses to introduce them to careers in the geosciences. CSULB G-DEP faculty conducted bi-annual visits to community college campuses to address issues affecting the ease of transition of

¹ Ambos, E.L., Rodrigue, C.M., Behl, R.J., Lee, C.T., Wechsler, S.P., Holk, G., Larson, D.O., Francis, R.D., & Whitney, D.J. (2005). Geoscience field studies at California State University at Long Beach: Urban applied research with a community focus. *CUR Quarterly* 26 (2):56-61.
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underrepresented students to the geosciences and to enhance the support given to students to select a major in the geosciences.

Undergraduate and Graduate Approaches

Kentucky West Virginia Alliance for Minority Participation Project

<http://www.wvepscor.org/library/files/10059.pdf>

LESSON: Focused regional efforts in geographic areas with high minority populations create unique opportunities for impacting diversity on campuses.

Increasing both the total number of STEM degrees awarded, and the number of STEM degrees awarded to underrepresented students, are priorities in both West Virginia and Kentucky. The 2000 Census reported that over 25% of the U.S. population was African-American, Hispanic, or Native American. These same minority groups made up only 9% and 4.1% of the population in Kentucky and West Virginia respectively. These numbers represent a recruitment challenge for the Alliance but have also served to strengthen the resolve of the participating institutions. The KY WV LSAMP alliance is a collaboration of ten academic institutions, the KY-NSF Experimental Program to Stimulate Competitive Research (EPSCoR), the WV-NSF EPSCoR, two state agencies, and the initial stage of a developing industrial support base.

The Alliance partners seek to significantly increase the quality and quantity of underrepresented students receiving baccalaureate degrees in STEM fields and enhance their research career aspirations. The current baseline total number of minority STEM baccalaureate degrees annually for these Alliance institutions is 128. This value is derived from 5-year averages where available to more accurately establish an appropriate

baseline value. Current institutional databases are unable to individually distinguish Asian and Pacific Islanders. Therefore, the values reported for minority populations consist of African Americans, Hispanics, and Native Americans. The 5-year target at the end of the Phase I project is to increase this number by 111%, achieving an annual minority STEM baccalaureate degree production of 270. The partners of the KY WV LSAMP propose to reach the goal of creating diverse campus environments and increasing minority STEM baccalaureate degree production.

The developed approach incorporates those six identified characteristics of successful programs in a manner tailored for the Alliance institutions and the two states. The focus areas for our approach are recruitment and retention, research experiences, transitional experiences, climate, curriculum reform, postgraduate career aspirations, and role models. In addition to individual campus activities in these areas, the Alliance will be enhanced by a best-practices committee of partner institutions for each focus area. Alliance-wide activities include an annual student research symposium, and workshops on such topics as the benefits of graduate school, preparation for graduate school, research career options, incorporating diversity into the curriculum, mentoring, and recruitment and retention of minority STEM faculty.

The impact of this program will be visible on both campus and state levels. The intellectual merit of the proposed activity is the increased knowledge base related to teaching and learning practices for STEM disciplines, the knowledge base regarding practices for improved retention, and the development of improved curriculum materials and practices for STEM disciplines. The foremost broader impact is the increase in minority STEM baccalaureate degree production. This will broaden the math, science,

and engineering participation of underrepresented students in two states. The increase in skilled workforce has the potential to significantly stimulate the competitive position of the two states relative to that available with the current educational levels, and, in doing so, attract new jobs which diversify the economic base. Improvements in the faculty demographics add expanded research capacity to academic community and broaden the participation of underrepresented faculty in STEM disciplines.

(Adapted from

<http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0603091>)

Research Internships in Science of the Environment Program

<http://www.cas.astate.edu/rise/>

LESSON: Undergraduate research experiences help recruit minority scientists. Careful mentoring plays an important role in continuing the pathways of underrepresented groups into higher education and often graduate school.

Mentorship is thriving at Arkansas State University, where geochemist Robyn Hannigan has established a program to immerse minority and female students in the study of environmental science. The result has been a double success for science and education. As the first member of her family to finish high school, Hannigan didn't expect to stay in school--much less science lab--forever. But now a professor of geochemistry at Arkansas State University, she is poised to do just that. And she's inspiring a growing number of minority students to follow her lead.

With funding from the National Science Foundation's Research Experiences for Undergraduates (REU) program, Hannigan designed a program to fund minority students to conduct undergraduate research with the ultimate goal of increasing diversity in the

scientific workforce. The program--Research Internships in Science of the Environment, or RISE--gives some students their first experience doing research. More than 30 undergraduates have received funding for summer research projects through RISE since the program was started in 2001.

Hannigan knows from experience that many students don't see the appeal of science until they have a chance to conduct research of their own. Raised in a cross-cultural environment by a Native American mother and Irish immigrant father, Hannigan grew up in a small Rhode Island town bordering the Narragansett Reservation. She was an average student at best, spending time before and after school pulling lobster pots and catching clams. When a graduate student from a nearby university recruited children from Hannigan's elementary school to help collect samples for a water quality research project, Hannigan volunteered. The course of her life, she says, was forever altered. The graduate student's enthusiasm for science proved contagious, and the hands-on experience gave Hannigan an early look at what life as a scientist could be like. "I remember [the graduate student's name] was Susan, but beyond that I don't know anything about her. But if she hadn't opened up her project to include elementary students, I'm not sure I would've gone into science," she notes.

Hannigan went on to study biology as an undergraduate at New Jersey's Trenton State College and, under the tutelage of an encouraging advisor, embarked on a project studying eye development in tadpoles. She discovered an affinity--and a talent--for research. "I was required to do research, and when I got into it, I realized I was a much sharper cookie than I ever gave myself credit for," she remembers.

There was an element of teamwork in research, too, that she had not experienced in her classes. When she came down with the chickenpox, a group of friends--who were conducting research projects of their own--went to the lab and took instructions from Hannigan over the phone on how to keep the experiments running while she was out sick. "The combination of a hands-on research experience, teamwork and the encouragement of my advisor built my confidence overnight," Hannigan says.

After college, she took a job as a field chemist, but her college advisor stayed in touch and encouraged her to go to graduate school. "He kept hammering away," she recalls.

The persistence paid off. Hannigan went to the University of Rochester, earning a doctorate in geochemistry in 1997. Now, when she reflects on the role mentorship played in her decision to pursue a research career, she says she feels compelled to carry on the tradition.

That's exactly what she and some of her Arkansas State colleagues are doing through the RISE program. RISE faculty recruit minority and female undergraduates for research projects in the environmental sciences, a thriving field of study in Arkansas. The state is a major agricultural producer, and more than half of it is covered by forest land, including three national forests. RISE participants work across disciplines to focus on the relationships between agricultural land use and ecological health. In combination with their fieldwork, RISE students also collect data from laboratory work. In doing so, they are exposed to cutting-edge analytical instruments for the analysis of water and gas samples--Hannigan's own area of expertise.

But the value of programs like RISE goes beyond research results: Sometimes they make a tangible mark on the science workforce. So far, Hannigan reports, more than 90

percent of graduates from the RISE program have gone on to pursue a doctorate. And for her, that reward is as sweet as any scientific gain. "Nothing's better than getting a Christmas card and hearing how much the program, and the mentorship that's built into it, meant to [a former RISE student]," Hannigan says.

The National Science Foundation's REU program fosters undergraduate research, supporting students who join ongoing research programs and research projects designed especially for undergraduates.

Minority Opportunities through School Transformation (MOST) Program

http://www2.asanet.org/media/MOST_conf.html

LESSON: Departments, as the home of university education, are crucial places for efforts to enhance diversity because of their integral role in attracting, training, and retaining underrepresented students. Their strategic locus lends to systemic, long-term change in diversity. (Please see also Chapter 4 for additional commentary).

In 2000, African Americans were 12% of the population but received only 9% of bachelor's degrees and only 6.6% of doctorates. Hispanics were 12.5% of the population, but received only 6.3% of bachelor's degrees and 3.8% of doctorates. A unique, multi-faceted program developed and spearheaded by the American Sociological Association (ASA) addresses such disparities and encourages more persons of all races and ethnicities to benefit from higher education and to help higher education benefit from greater diversity.

The ASA conceived the Minority Opportunities through School Transformation (MOST) program with the intention of finding ways to alter "business as usual" practices at colleges and universities. The data demonstrates that, from its 1994 launch through its

conclusion this summer, the MOST program has significantly increased diversity among the students and faculty and transformed the curriculum and climate in sociology departments at the 11 participating institutions.

“MOST is unique among diversity-related projects because it focused on the academic department as the instrument of systemic, institutional change,” said Felice Levine, former Executive Officer of ASA, and the key architect of the MOST program. “We chose not to pursue a student-by-student or institution-wide approach because we wanted MOST to function right where education and training occur—at the department level. Departments have the capacity to initiate curriculum changes, recast the academic climate in which majors learn, make deliberate choices about mentoring, and conduct their own recruitment and training. We considered departments to be the strategic location of change in higher education, and the project’s results bear us out.”

Participating institutions were selected on a competitive basis and represent the broad range of U.S. colleges and universities. The 11 institutions are: Augusta State University; University of California, Santa Barbara; Grinnell College; University of Nebraska, Lincoln; Pennsylvania State University; Pitzer College; University of Puerto Rico, Mayaguez; Southwestern University; Texas A&M University; University of Texas, El Paso; and William Paterson University.

These 11 participating departments made significant and lasting change by addressing five key elements of the educational process: curriculum, research, mentoring, climate, and the pipeline.

1. *Curriculum.* Through MOST, sociology departments re-evaluated curricula with a focus on better preparing students for graduate training and subsequent careers.

- MOST emphasized increased rigor in scientific methods, direct research experience, and the substantive integration of race, ethnicity, class, and gender.
2. *Research.* Participating departments worked to improve research training for all students so that they could develop the scientific reasoning skills, interest, and knowledge necessary for successful careers. Research training provides students with methodological competence and hands-on research experience under the guidance of faculty mentors.
 3. *Mentoring.* MOST departments engaged in efforts to use mentoring of students as one of the most effective ways to engage students in education. Mentoring fosters broad-based knowledge and understanding, enhances students' intellectual and social skills, and develops their professional identity. In the MOST program, mentoring was the responsibility of all faculty for all students.
 4. *Climate.* Each institution in the MOST program worked to create a departmental climate that addressed issues of diversity and multiculturalism and that contributed to the development and growth of all students.
 5. *Pipeline.* MOST was designed to increase the number of scholars of color throughout the academic pipeline, enhancing the education of diverse talent pools and preparing minority students for future leadership roles in the academy or beyond.

The results of the MOST program were dramatic:

- At the outset of MOST, only about one quarter of the courses dealt with diversity compared with more than 50% by 2000-01.

- The percentage of graduating minority majors nearly doubled over the course of the program. At the outset of MOST, 18% of graduating majors at the participating departments were minorities. By the end of the 2000-2001 academic year, 33% of graduating majors were minorities.
- Departments reported similar results with respect to minorities on the faculty. In 1993-94, departments overall reported 22% of their faculties to be minority, but, by 2000-01, the proportion increased to almost 30%.

“MOST emerged at a time prior to the debate over affirmative action in higher education reaching a fever pitch, and in many respects it offers approaches that transcend the rhetoric,” Levine said. “Its success demonstrates that deliberate change, aimed at the department level in institutions of higher learning, enhances the education of students of color and of all students.”

The broad range of participating schools illustrates the effectiveness of the MOST approach. The program succeeded at all institutions—large and small, public and private, with or without Ph.D.-conferring programs, majority minority or majority white. The leaders of the program pointed out that, although MOST was designed for and implemented in sociology departments, the program’s lessons for those engaged in promoting diversity in higher education are relevant to all departments, to faculties in other fields and disciplines, to college and university administrators, and to the public and private foundation community.

The pre-publication edition of the project report, *Promoting Diversity and Excellence in Higher Education through Department Change*, describes ten “best practices” drawn from departments’ experiences with the MOST program:

1. Important curricular change can occur deliberately, yet incrementally.
2. Traditionally informal processes, such as mentoring students, need not be left to chance. Departments can put in place systemic ways to ensure that mentoring reaches all students.
3. Student engagement is essential.
4. Department chairs, department committees, and other university administrators must be engaged in the process of reform in order to achieve lasting change.
5. Students need to see the connections between what they do in class, what they are studying, and what underlies this work.
6. Modeling of professional behavior draws students into the profession.
7. Minority recruitment requires intentional outreach and persistence.
8. Physical space and informal opportunities matter greatly to department climate.
9. Multi-year, long-term projects can make lasting changes in the culture and mindset of a department.
10. Scientific and scholarly societies are an important source of leadership and support. Public and private foundations also have a valuable role.

The design of the MOST program, its basic tenets, and the ways in which it was implemented at diverse institutions illustrate that the program can be easily replicated as a change model for other disciplines. Participating departments developed deliberate approaches to problems that are often regarded as beyond the control of faculty, or even intractable, and achieved fundamental and sustainable change.