

RECRUITING AND RETAINING MINORITIES IN STATISTICS

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Abstract:

Statistics is a profession that recognizes and prides itself in diversity. Ethnic and racial diversity are valuable attributes, and there is recognition that certain minority groups are particularly underrepresented in the profession. This indicates the importance and need to examine recruitment and retention efforts. This panel and this article discuss perspectives at various levels in the educational and professional development process as well as standpoints relevant to various minority and gender groups, examining what actions our profession can take to address the issue, embrace this diversity, and work to strengthen the statistical community as a whole.

Introduction

Former President of the American Statistical Association (ASA) Michael O'Fallon has said "The diversity found in our profession is something to celebrate, I believe, because it makes us stronger and illustrates our evolutionary abilities." The diversity in our profession exists not only in areas of training, application, and in all manner of endeavors, but also in racial, ethnic, and gender backgrounds. There are also issues of diversity in terms of levels of access to training, quality of training, and just what determines who gets access at all.

One of the challenges that the ASA and the statistics community faces is our image in the eyes of society at large - our customers, our colleagues and competitors, our friends, our families, and subsequently our appeal to future statisticians. We are ambassadors of the statistics profession and statistical thinking. In light of this, the panel in this session will discuss and examine the charge of recruiting and retaining minorities, particularly historically underrepresented minorities, in statistics and

statistics-related professions. Communication, preparation, inclusion, cohesion, interpersonal and group interaction, education, and environment are most important to improving an already strong society. The underrepresentation of some minority groups in our profession indicates the importance and need to expand our recruitment and retention efforts.

ASA Membership Demographics (2002)

Race	Percentage
White	80.24%
Asian	16.53%
Black, African American, or Negro	1.44%
Other	1.43%
American Indian or Alaska Native	0.18%
Pacific Islander	0.17%
Total	99.99%

Ethnicity (Latino)	Percentage
No	94.25%
Yes	5.75%
Total	100.00%

Approximately 60% of ASA Membership Responding	
Total Number of Responses	7684

Source: American Statistical Association, 2002 Demographic Information, Alexandria, Virginia

An examination of the demographics of the ASA shows that Whites make up approximately 80% of the membership, which is close to the representation in the general United States population. Although Asians make up over 16% percent of the membership of the American Statistical Association and are not an underrepresented group, other minority groups are greatly underrepresented. This is not to say that there are no special issues or concerns relevant to Asians in the profession. The society

and the profession can easily and proudly point to significant contributions and accomplishments made by Chinese, Japanese, Indian, and other Asian statisticians. The will and work of an individual who chooses to pursue studies in statistics is the first element in determining whether or not that person will choose it as a profession. It may well be, and it is indeed a popularly held belief, that in certain countries studies in mathematical fields such as statistics are encouraged more than in the United States today, and thus these students are more apt to take interest in good professional opportunities in the field here.

As outsiders, it is common for minority groups to face misperceptions and negative stereotypes that they are forced to overcome and address. At a certain point, when some critical mass of an ethnic group is present, it can become easier for them to work together in a community and have support groups. This can be less important in more cosmopolitan rather than isolated parochial communities if a kind of "blending in" is both possible and permitted. Such a blending in is not always for everyone, and certainly one would hope to not have to give up or renounce all of his or her culture, background, or heritage in order to function in a educational, social, or work environment.

Approximately 6% of the ASA membership classifies itself as Latino or Hispanic. No other ethnic or racial group is estimated at over 2%.

African American, Hispanic, Native American, and other historically under-represented minorities are not, in general, very visible, in the field of statistics. Part of this has to do with the fact that statistics is not, in general, a very visible field among minorities, either inside or outside of the educational process. At the high school level, there are very few inner city schools with Advanced Placement (AP) statistics programs. At the undergraduate and graduate levels, statistics is not highly advertised, and with very few prominent minority statisticians with notoriety or recognition now even historically, it simply does not show up on the radar for most young minority students. The road to success in other fields is far more visible for talented young minorities to see.

It would seem that targeted efforts to increase minority inclusion are necessary in order to make a change. Understanding basic statistics, like understanding mathematics, is useful and even necessary for everyone today. Given the vibrancy and diversity of areas in the statistics profession, we have found that statistics offers all kinds of work that can appeal to mathematically, scientifically, and technically minded youth to whom we have reached out at MATHfest conferences, Mini STATfest conferences, school visits, and ASA chapter activities. Part of the problem is that these kids do not know where they fit in and what to really expect. Given the opportunity, there is every reason to believe that they can make significant contributions to strengthen the field and society.

New directions and initiatives are to be encouraged. There are established programs around the country that do exist, such as Dr. Nagambal Shah's Summer Mathematics Program for students at Spelman. Their presence has yet to affect the level of difference truly desired and ultimately needed, but we are only at the initial stages, and already we have made worthwhile strides. There needs to be more partnerships – undergraduate institutions with high schools, with other undergraduate institutions, graduates schools, and government agencies, with private foundations, associations such as the ASA, and other such groups reaching out to do their part. The ASA Committee on Minorities in Statistics, led by Dr. Gladys Reynolds of the CDC, sponsored its first Mini STATfest introductory undergraduate conference for minorities at Spelman in 2001 with Shah as the host. Dr. Shah and Dr. Reynolds coordinated this inaugural event. This new initiative gave many students an introduction to real statisticians, statistics applications, role models, and opportunities. Spelman alumnae were among the panelists and presenters, which helped the students connect further with the possibilities of working in the field. With Spelman's position in the Atlanta University Center, a consortium of highly respected Historically Black Colleges and Universities, this was an excellent place to reach out.

After the first conference at Spelman in 2001, a second Mini STATFest was held in April of 2002, this time at Hampton University, hosted by Dr. Carolyn Morgan and the Hampton Mathematics Department. Dr. Morgan, Hampton Mathematics Professor Dr. Douglas

DePriest, and Dr. Gladys Reynolds of the CDC. As with the first conference hosted by Dr. Shah, there was excellent representation from statisticians in industry, government, and academia to give students a view of the field of statistics. Professors from Virginia Tech and North Carolina State also discussed graduate opportunities at their schools and encouraged students. Fritz Scheuren, Vice President for Statistics, National Opinion Research Center, University of Chicago, and Chair, Social Statistics Section, ASA, gave the keynote address, "Statistical Disaster and Success Stories?" Together, these two conferences touched many students from several universities and have encouraged talented students to seriously consider and even choose to pursue graduate studies in statistics – students that would have never had even considered the field before.

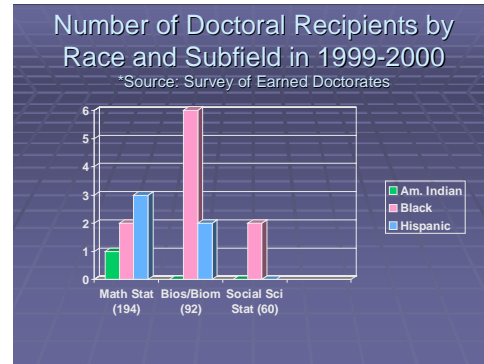
An important part of the goal here is to enhance harmony, respect, and inclusion among all the diverse members of our society as we work for greater and greater exciting technological breakthroughs and advances.

Where does it start? It starts with an interest in and a love for the field, and with inclusive environments where respect, reward and credit for ones ideas and work, freedom from harassment, discrimination and bias are the norm. These are things that essentially everyone would agree that they would want for themselves. It is common sense as well as good business sense to want them for others, too. The authors would like to take it beyond a simple start and suggest some things that can take us further in the direction we need to go.

Kimberly Weems

Dr. Kimberly Weems, postdoctoral research associate in the Department of Statistics at North Carolina State University, gave a presentation entitled *Changing the Faces of Statistics Ph.D.'s*. She began by discussing the alarmingly small number of Ph.D.'s that have been earned by African Americans, Hispanics, and Native Americans. For example, in the 1999-2000 academic year, only 16 out of a total of 346 doctorates were awarded to underrepresented minorities in the fields of mathematical statistics, biostatistics, and social statistics combined (Survey of Earned Doctorates: Summary Report 2000). As emphasized by many at the conference, people of

color make up a larger percentage of the US population each year. Hence it is imperative that we also increase the number of underrepresented minorities who earn doctorates in scientific and technological areas, such as statistics.



To achieve this goal, Weems stressed the importance of a collaborative effort among administrators, faculty, and students at universities. Some strategies for administrators include (i) recruiting faculty from diverse backgrounds; (ii) sponsoring networking opportunities; and (iii) providing fellowships and support for other scholarly activities. Weems mentioned several strategies for faculty. Among the most important of these are to (i) establish mentors for the students; (ii) build a critical mass of minority graduate students; and (iii) treat students as individuals. For underrepresented minority graduate students, Weems noted that communication is essential to their success. They should discuss any difficulties that may affect their academic progress with their mentor or advisor. In addition, it is important for them to participate in departmental workshops and to present their research. Weems also recommended the following strategies for minority students: (i) form study groups and (ii) learn the culture of the department and the university.

Next, Weems discussed the recruiting and retention efforts of her department. Currently, there are nine underrepresented minority graduate students in the Department of Statistics at North Carolina State University. Three of these students are in their second year, and the rest are first-year students. Several of these students were recruited when N.C. State faculty members attended conferences, such as MATHFest and STATFest, which encourage underrepresented minority students to pursue graduate studies in the mathematical and

statistical sciences. These faculty members also recruited at Historically Black Colleges and Universities (HBCU's). The department's recruiting and retention efforts have been greatly enhanced by the NSF-funded VIGRE (Vertical Integration of Graduate Research and Education in the Mathematical Sciences) program. VIGRE fellowships have been awarded to about one-third of the minority graduate students. Other efforts of the department include arranging visits and talks by prominent minority professors and forming a mentoring program. The faculty and administration, which include two tenured African-American professors, are committed to increasing the diversity in its graduate program and ultimately producing more minority Ph.D.'s in statistics.

Weems suggested that institutions might look at the following categories to see what stage of maturity and health they have attained in terms of cultural inclusiveness: (i) cultural proficiency, (ii) cultural competence, (iii) cultural pre-competence, (iv) cultural blindness, (v) cultural incapacity, and (vi) cultural destructiveness. On this scale, cultural proficiency is the healthiest, best, and most mature state, while cultural destructiveness, on the other end of the spectrum, is quite obviously the least healthy, least desirable, and least mature state. This same scale and spectrum can easily be adapted and applied not just to race, culture, and ethnic inclusiveness, but also to gender inclusiveness and other areas.

Nagambal Shah

The number of minorities enrolled in graduate school, especially in the doctoral programs has been relatively very small in the statistical sciences. Of those that enter, only a small fraction reaches the finish line. "While the country's minority population continues to grow rapidly, members of most racial and ethnic groups are far from being proportionally represented on most college campuses" (Chronicle of Higher Education, January 2002). The graduate school scene is much worse. As we begin to address the problems that face today's world it is important that we not only recognize the need for diversity among the talented problem solvers but also find effective mechanisms to produce them. Is diversity just adding a few invisible dots, mostly outliers, in the tapestry? "There is nothing that is a more certain sign of insanity than to do the same thing over and over and expect the result to be

different" (Albert Einstein). Are we stuck in a RULE RUT?

Diversity and Statistical Training

The emergence of AP Statistics in the high school curriculum has recently sparked the interests of several youngsters as is evidenced by the increasing volume of the AP Statistics test booklets that are being graded by the many educators in the nation. But the numbers of minority students that take AP Statistics and the number of minority teachers that teach AP Statistics are relatively small. These students need minority AP Statistics teachers/graders as roll models to make them understand the importance of Statistical Sciences as a decision making tool. Summer enrichments programs in statistics should be available for minority high school students in college campuses.

Undergraduate Statistics courses are usually available as electives for mathematics majors. Statistics courses are also offered in areas such as sociology, psychology and economics. Students should be encouraged to take at least one statistics course at the undergraduate level. We must cultivate undergraduates for a research career.

Many minority students have limited chance to learn about research because they attend undergraduate institutions where research activity is scanty or scarce. A number of universities have established programs to provide research experience for minority and other undergraduate students. We need more of those in the area of statistical sciences like the Summer Minority Program in Biostatistics at Harvard. Motivational speakers as mentors and roll models should be made available to these students.

We must communicate at the undergraduate level the opportunities a doctorate degree offers for a fulfilling career and life. Let the students know about the rewards of an early sacrifice of few years to complete the graduate degree. Let them realize their importance as a minority person with a terminal degree in the decision making process and how that affects several underrepresented minorities. Constantly reinforce this message through advising, mentoring, clubs, graduate school fairs, conferences, departmental brochures, summer internship and research opportunities and course preparations.

Special programs that emphasize statistics in undergraduate instruction and research/independent study should be brought in during the regular academic year within a minority serving institution. One such program held at Spelman College recently (1998-2001) was the NSA sponsored Mathematics Enrichment Program. Scholars that were part of this program were required to take two semesters of mathematical statistics. A Summer Mathematics Institute provided enrichment classes, including problem solving and computer activities, with mentoring by a graduate assistant (a Spelman graduate). Seminar speakers who were former graduates of Spelman or other minorities who were well established in their careers were brought as roll models. Three of the students from that program are currently enrolled in graduate school, one in statistics, one in mathematics and the third in operations research.

Efforts must be made to hold conferences focused on enlisting undergraduate minority students to graduate school in statistics. Such conferences should be held periodically nationwide possibly in minority institutions. The Mini STATFest conferences were created specifically for this purpose, and the first was held at Spelman College in November 2001. The conference brought speakers from graduate schools, industry and government including the voices of minority students currently enrolled in graduate schools. The importance of graduate education in statistics, graduate school application process and survival skills were discussed. Over 150 students attended the conference on a Saturday. The conference was coordinated by Nagambal Shah, professor of mathematics at Spelman College and Gladys Reynolds, Senior Statistician at Centers for Disease Control and Prevention. Listening to several of the featured speakers who were former graduates of Spelman and Morehouse colleges (and former students of Nagambal Shah), who had their terminal degrees in statistics was very empowering and encouraging to the students. Thanks to the sponsors -- the American Statistical Association's Committee on Minority Statisticians; Social Statistics and Statistics in Epidemiology Sections; Spelman College Mathematics Enrichment Program supported by the National Security Agency; and Office of Minority Health, Centers for Disease Control and Prevention -- the conference was a success.

The second Mini STATFest held at Hampton University was also a great success.

Partnership

There is nothing more important than partnerships. There should be partnerships among minority-serving undergraduate institutions. In addition, minority-serving undergraduate institutions should partner with high schools, graduate institutions (especially with those that have demonstrated success with minorities), government agencies and corporate partners. This networking is very important in graduate admission, mentorship and establishing plans for beyond graduate school.

Bridge Programs

Establishing successful bridge programs in statistics during the summer before starting the graduate school can enhance success for minority students as evidenced by the EDGE Program established by Spelman and Bryn Mawr Colleges (<http://www.edgeforwomen.org>). Such programs should provide intense training at the first year course requirements, graduate school climate dialogues, preparation for qualifying exams, etc.

Graduate School Recruitment/Retention

Accepting a minority student in the graduate program does not change or even address the problem of diversity in graduate education. It is a matter of commitment over a period of time to recognize positive results. As always students must keep in mind that steady progress can only be made with intense effort. So the end result should be kept in mind in establishing programs to aid in that effort. Revise admission criteria for a variety of students to qualify for admission and successfully complete the program. Bring more than one minority student at a time and recognize them as an integral part of the program.

- Graduate students need money; minority students need more money.
- Provide one to one advising to minority students and train the faculty members that advise these students. They need all the encouragement they can get. Continue advising until the student has passed the qualifiers, joined a research group and accepted by a research advisor. These faculty advisors must be seasoned members of the department who are familiar with the strengths/weaknesses of the department.

They must maintain an ongoing relationship with the student. This asks for commitment:

- Introductory graduate courses and courses that prepare for the qualifiers must be taught by strong teachers with commitment and sensitive to diversity issues.
- Special efforts should be made to help minority students understand the culture of the graduate department and how to function within those parameters.
- Continually foster a sense of belonging in the program for minority students. Make them feel that they are valued. Diversity is a matter of commitment for every one in the department.
- Create a community of minority students they have things in common to share. Encourage interactions with all students/faculty.
- Retention must be a continued focus in recruitment. It requires constant attention.
- Provide special assistance with course material, time management and study skills.
- Social interactions are important.
- Form an advisory committee of successful undergraduate faculty advisors, former students who have completed the program and some graduate faculty.
- Demonstrated success brings more success, therefore focus on building a successful program.

Beyond Graduate School

Graduate faculty advisors and research advisors must see that their student is placed in a good supportive employment position upon completing the graduate degree. They must continue to mentor them in terms of publishing, job training and other matters so that their efforts in turn produce multiple dividends to last for the future.

Are we ready to break the RULE RUT?

Carolyn Morgan

When Dr. Carolyn Morgan speaks about the issues of minorities in statistics, she carries a lot of authority. As an ASA Fellow who spent over 20 years in industry as part of the well-respected statistics group at GE Corporate Research and Development (now GE Global Research) and as the current Chair of the Department of Mathematics at Hampton University, she has lived and understands the issues. For over thirty

years she has often attended meetings where she was the only female and African American present. She passes on to her students that technical competence, confidence, and determination are some of the keys to a successful career in statistics or any other discipline. She emphasizes that success does not come without hard work and she reminds us “diamonds are the result of a lot of pressure.” Dr. Morgan knows the importance of good role models and she has worked tirelessly to be one for the young people in her community. For her contributions she was the recipient of the GE Phillippe Award for community service.

In her presentation, Dr. Morgan first stressed the importance of our efforts to increase minority inclusion in the statistics profession. For example, she noted that more minority statisticians are needed to achieve better minority representation and participation in the design, analysis and disclosure of the results of statistical studies. Quite often minority populations are not included in social science, medical, pharmaceutical, and other major research investigations.

Dr. Morgan took the occasion to indicate that our focus should not be the 2R’s (recruiting and retaining) minorities in statistics, but rather the 3R’s (recruiting, retaining and recognizing) minorities in statistics. Statisticians often become the “statistically significant others.” We don’t promote ourselves well. This is even more of an issue for minority statisticians. Careers in statistics and mathematics often don’t receive the high visibility and recognition they should. In addition, the number of minorities interested in most technical fields is small. This is due in part to the fact that most minority middle and high school students are given limited exposure to the appropriate mathematics and science courses required to prepare someone for a career in science.

Some of our next step efforts should include the following activities. First, more undergraduate and graduate statistics courses and majors are needed at minority-serving academic institutions. If we are to have more minority statisticians, we are going to have to “make our own.” Minority statisticians and statistics professionals need to return as professors at minority-serving institutions. For example, the Hampton University (HU) Mathematics Department in Hampton, Virginia has two former General

Electric statisticians on its faculty. (One individual is a former Hampton alumnus.) Academic institutions should establish tenure and promotion guidelines that would encourage minority statisticians and others in the profession to consider positions in academia. (Reference the 2001 Mathematical Association of America "Guidelines for Programs and Departments in Undergraduate Mathematical Sciences.")

Minority statisticians must become more proactive and interdisciplinary in the 3R's. We must establish and become involved in academic and community-based partnerships. We must help middle school and high school students recognize the importance of taking the appropriate mathematics and science courses. We must serve as role models to these students. We must spread the word about our profession to the guidance counselors, promote and help teach Advanced Placement Statistics courses at high schools, and talk about our profession at other conferences, workshops, etc. targeted at minority students (high school, college, etc.). The American Statistical Association, statistics professional organizations, corporations that hire members of the statistics profession, academic institutions, etc. should increase their support and aid in the establishment of undergraduate and graduate statistics programs at minority-serving institutions. In addition, they should continue to sponsor statistics conferences, workshops, etc. at minority-serving institutions where minority statisticians and role models from business, government, academia, etc. participate as speakers. In April 2002 such a Mini STATfest conference was hosted at Hampton University through the sponsorship of American Statistical Association (ASA), ASA Committee on Minorities in Statistics, ASA Social Statistics Section, ASA Statistics in Epidemiology Section, Office of Minority Health, Centers for Disease Control and Prevention, GE Fund Six Sigma Tools for Mathematics and Engineering at HU, and the Center for Disease Control (CDC) Minority Health Activities Program National Center for HIV, STD and TB Prevention. The program organizers were Dr. Morgan and Dr. Douglas DePriest from Hampton University and Dr. Gladys Reynolds from the Centers for Disease Control and Prevention.

It's not just words that are important, but deeds as well. Dr. Carolyn Morgan and her husband

Dr. Morris Morgan, the Dean of the School of Engineering and Technology at Hampton, are using a grant from the GE Fund to revamp and integrate statistics into the curriculum using the Minitab statistical software. It is hoped that implementing MINITAB across the engineering and mathematics curricula will certainly strengthen the overall programmatic effectiveness of both degree programs and attract a cadre of students. Mr. Christopher Stanard, Dr. Roger Hoerl, Dr. Marshall Jones and other GE statisticians are serving as role models and mentors to students at Hampton. Offering such an integrated MINITAB curriculum at Hampton University will enhance the university's peer recognition, demonstrate the forward thinking of the institution and be a unique marketing tool for the institution since no such program exists at any other Historically Black Colleges and Universities (HBCU's). At Hampton, we are indeed working to implement the 3R's and "make our own."

José Ramírez

It can be difficult being a minority within a minority field. In school in the United States, Dr. José Ramírez was doubly an outsider as both an ethnic minority, being Hispanic, and a foreigner. He points out that it is difficult to succeed, but it is possible, which he certainly has done.

Role models are important and helpful. Those who have succeeded, whether near or far away, can serve as inspirations, and their work ethic, their writings, and their words of wisdom can enlighten. A student eager to learn and to grow could often gravitate toward role models would have qualities with which they can identify, but they do not necessarily have to be the same sex, race, or ethnicity. The same goes for mentors. In any case, for a beneficial relationship, there has to be some degree of mutual acceptance and respect as the basis, as well as a common interest in general. These things were helpful in the growth that has led to his position as a Statistician at W. L. Gore & Associates, Inc., but of course the essential piece was his own interest, ability, and willingness to work to achieve his goals.

Theda McPheron-Keel

Theda McPheron-Keel's story is one of "Walking both roads" – one the way of traditional American Indian people, and the other the way of the dominant 21st century American culture. The dichotomy is sometimes very

difficult to reconcile. Her education has led to difficulties with acceptance among members of her own family. Though this is not an uncommon issue for many who come from communities, minority and other, in which most people are not educated, or in which education is seen as something for people who think they are better than others, her situation is magnified by historical issues between American Indians and the dominant culture in the United States.

The situation is far from simple. There are issues of identification, self-definition, and definition by others. For “breeds,” who are not “full-blooded” American Indian, the question is certainly present. Only one 1/6th of the American Indian population is “full blood.” Concerning mentors and role models, only 1/3rd of American Indians live past 45, and a person 50 years old is considered an elder.

The issues of American Indians living on reservations are particularly poignant. Though most do not live on reservations, a substantial portion does, and many of these have to go without many things most Americans take for granted. Education is needed, but when outsiders – outside schools, outside experts, and so forth – are involved, but it can make for very uncomfortable situations for those who have not the opportunities or who have felt particularly burned by society. Not surprisingly, trust is an issue. It would help to have more American Indians in places where they can advocate for their issues in health and other studies and to make sure their perspectives are included, but first there is a great deal of preparatory work to be performed and many roads that need to be built. One seemingly small but important item is the teaching and demystifying of the elements of fundamental statistics, the statistics which are all around but which so many people really do not understand. This is an example of an item can help empower people, clarify ideas that need to be communicated, and help build some of those roads, even if they do not choose to become professional statisticians.

Further Items

There certainly are institutions that are obviously doing many things right and working hard to be culturally proficient. Dr. Donald Martin, who chaired this session, is a professor at Howard University and also a researcher at the US Census Bureau. Martin, McPherson-Keel, and Weems all matriculated through the program

at University of Maryland, College Park. Shah taught Weems at Spelman, and Christopher Stanard, the session organizer, can point to excellent mathematics instruction as an undergraduate at Morehouse, a college across the street from Spelman in the Atlanta University Center, as well strong statistical training as both an undergraduate and graduate student at Georgia Tech. Georgia Tech is known for being among the top schools producing African Americans engineers at the both the undergraduate and graduate level. These are not the only institutions that members of this session can look back upon with fond memories, nor are these by any means the only schools that have programs worth emulating. That still does not mean that statistics is by any means popular, well known, or even understood enough to attract more than a few minorities or generate much attention as things currently stand. As Shah and others pointed out, more should be done to reach out to pre-college students as well as those at tribal colleges and other universities. More people need to know that statistics is relevant to their lives and is worth studying, and more minorities need to also be shown true paths and options for success in statistics and statistics-related fields.

Weems shares a quote from Richard Tapia, Director, Center for Excellence and Equity in Education, Rice University: “No first-world nation can maintain the health of its economy or society when such a large part of its population remains outside scientific and technological endeavors.” It certainly is not as if we do not have a choice. Making a difference is by no means an impossible task. There is the inspiring story of Frank C. Carr that can serve as an example. He was a successful White businessman who reached out to found the non-profit organization INROADS (<http://www.inroads.org>), which mentors young minorities and give them a chance at internships and additional study opportunities. He later left the business world to work on American Indian reservations. We can say that he went beyond the mere call of duty, and far beyond the most of us, to answer the call of his heart to help his fellow man. At the same time, his efforts gave people direction and opportunities to help, even a little amount, in ways that have made tremendous differences. Some people move mountains; some people open doors. Everyone can keep an open mind and work for mutual understanding and respect in the profession of

statistics as well as in the practice of everyday life. In a web of mutual interdependence and accountability, we can see that this is an issue that truly impacts us all.

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