

Profile of Uphill Battle

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ABSTRACT

An overview of the current status of women and minorities in science with emphasis on the agricultural sciences is presented. Beginning with undergraduate studies through the professorate, women and minorities face an uphill battle. In this report, some of the concerns are elucidated. Students often face lower expectations from faculty and must work twice as hard to prove themselves. Often, a newly hired faculty member is given many more responsibilities than their white male counterparts. They are expected to serve the minority population, be the representative on committees and, at the same time, maintain academic productivity. This report summarizes strategies and resources for both students and faculty. Sensitivity and the appreciation of differences contribute to the awareness of the problem. A major focus for both groups is the need for a mentor to guide them through the system. Mentoring is only one aspect to aid in forward progression, and it is a partnership of mutual trust. Methods to establish dialogue and open communication are presented. The overall goal is to allow each individual to maintain identity, while contributing to the advancement of agricultural sciences through a diversity of ideas.
(**Key words:** diversity, agricultural science)

Abbreviation key: HBCU = Historically Black Colleges and Universities, K-12 = kindergarten through secondary education, QEM = Quality Education for Minorities.

INTRODUCTION

Gender inequity in animal science (Glenn, 1996), academia in general (Pell, 1996), and industry (Harlander, 1996) have been highlighted in a previous symposium sponsored by both the American Society of Animal Science and the American Dairy Science Association. A consistent theme is the importance of guidance and mentoring to navigate the system. In 1998, Schillo fo-

cused not only on gender issues but also noted that there was an underrepresentation of ethnic minorities in animal science. He argued for the need of a more pluralistic animal science, a field that has embraced tradition that has not included minorities. As we are now in the 21st century, issues of sexism and racism generally have remained unresolved in agricultural sciences. These topics may be actively or passively avoided in academic discussions.

According to Bower, Auletta, and Jones (1993), racism is based on three premises: 1) a cultural presumption that one group is superior and another is inferior; 2) institutional practices that reinforce the cultural presumption; and 3) individual beliefs in both the cultural presumptions and institutional practices. Traditionally, members of the majority culture are not aware of their biases and attitudes. Usually, they would never consciously act against another group. However, sexist and racist jokes, inappropriate comments, innuendoes, and stares are sometimes done without malice but also with insensitivity to others. Comments such as "How can I possibly be racist when I have (supply your own adjective) friends?" Another example is the family who has had "a dear maid who was loved and included as one of the family." Reality is that the maid is a servant and, by definition, serves. Other problems include the belief that one member of a particular group can speak for all members of that group as related groups. Further, it is often perceived that actions of one member of the group reflect the actions of a like member of the group. Unfortunately, such attitudes carry over into academia and create barriers to success. The focus of this discussion will be to examine problems and to suggest strategies to overcome the problems.

THE UNIVERSITY AS A POLITICAL INSTITUTION

Despite credentials, women and minority faculty find themselves playing a game without knowing all of the rules. Bowser et al. (1993) describe the unwritten rules to include the fact that the university is political, and personal and professional networks are powerful. Further, there are hidden agendas that cannot tolerate public exposure and perceptions do matter. These authors go on to mention the experience of one of their

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colleagues. They describe that the experience of a professional of color in higher education is similar to being in an amusement park. There is a room with mirrors giving the illusion that the floor is level. However, when starting to walk, the floor is tilted but no one else will admit to the tilted floor. Thus, the professional is accused of being too sensitive.

Inequity in pay for women and minority faculty is an example of institutional politics. How is it political? Often, at the time of hire, neither women nor minorities understand the nature of bargaining, obviously within the realm of budgetary parameters for the University. This factor is especially applicable to first-time hires into a tenure tract position. As a sequitor, if the initial salary is less than the white male counterpart, then the percentage of an across-the-board salary increase is less. Therefore, in actual dollars, salaries will never reach parity. Unless the new faculty member is assertive, pro-active, and is aware (operative word) that salary information, at least at public institutions such as the land-grant colleges and universities, is open for review, then such information remains with the administration. During the last decade, as academia is under closer scrutiny than in past decades, the issue of salary inequity has come to the forefront. Many institutions have made positive adjustments to make salaries comparable. As a course of action, it is critical that women and newly hired minorities do their homework. They must review the records over several years for patterns in salaries and subsequent pay increases. Because ethnicity can be omitted from records, it is easier to investigate salary trends on the basis of gender rather than ethnicity. One may use the trends as indices for salaries being paid to minority faculty.

Irrespective of the facts, perceptions can cloud vision in recruitment. Thus, the active recruitment of women and especially minorities in the basic and applied sciences is thwarted by the unwillingness to seek out qualified applicants. It is first necessary to cultivate the pool, which begins as early as the K-12 years in preparation for undergraduate study. As students begin their professional pursuits as minority undergraduate students, they are faced with the stigma of Affirmative Action.

Even though such policies may be nonexistent and all of the entering students are well qualified, negative perceptions of peers and traditional faculty members may create a barrier. These students are often victims of low expectations. Raised hands in classes may be ignored. Either the professor or peers may not take responses to questions or comments by underrepresented students seriously. Female students in male dominated classes experience similar problems. With the high visibility, any small mistake is noted. Such

attitudes may lead to both fear and isolation. For first-generation college students, parents may respond by telling their children to come home, or to try to ignore negative perceptions and to worry only about the degree. Unfortunately, without recourse, minority students may feel isolated. Such feelings are not conducive to success. Many times the attrition rate among minority students is the result of poor grades, but reasons for the poor grades are not addressed.

Another example of how minority students are treated is that they may be placed automatically in special courses. Irrespective of academic or socioeconomic background, the assumption is that all minority students *need* (as opposed to want) a course addressing their adjustment to majority institutions. Transition courses for at-risk students or those who may have difficulty in the adjustment are a good thing. However, it is inappropriate to place all minority students in 'race-based' courses without allowing them to make the choice. As a result, some students are insulted and feel as if they have been singled out because of their color. Fortunately, they usually have the option of dropping the course. This situation is not an issue with their white peers.

Students from low socioeconomic backgrounds, including white students, but particularly those of color, face similar assumptions as described by Massey (1992). Often, faculty regard these students as inadequate and mistake their lack of confidence and/or poor preparation for lack of intelligence. Very few faculty will seek out and develop the potential of these students. Those who do, often find high-achieving students once students have gained self-confidence and a feeling of self-worth.

Assisting with the efforts promoting undergraduate education at the baccalaureate level are the Higher Education Grants offered by the USDA. The goal is to increase minority presence in the applied sciences.

Students at the postbaccalaureate level applying for graduate school are burdened with the scrutiny of departments. These students often have to prove themselves far beyond the expectations of their white counterparts. Mentoring is important at both the undergraduate and graduate levels. Faculty and peer mentors can assist in navigating the system, particularly in developing a network. Research advisors can alert their students to postdoctoral opportunities and be sure that they, as advisors, have prepared the student to take on such a responsibility. It is important that the postdoctoral student has been trained in manuscript preparation and some experience in grant writing. Recruiters for new faculty should be prepared to search for and to offer a commitment for financial support to a prospective faculty member. If all is in place, the new hire is

able to obtain extramural funding for continued support of his or her work. Agricultural colleges and the departments, therefore, have to be serious about their efforts and be willing to exert the energy and the resources to accomplish their goals.

The Uphill Battle

Many problems arise once the new female or minority faculty is in place. The new faculty member is faced with an established network and possible resentment from colleagues who may feel that race or gender was the reason for the hire. Networks may not invite the new faculty member to lunch or golf or other informal gatherings. Thus, opportunities for collaboration may not be an option. Meanwhile, the cloud of tenure looms while the new nonwhite *assistant professor* gets bogged down with minority student problems. There is the expectation of serving as a role model and mentor. Once the minority professor is in place, he or she has the responsibility (real or perceived) of minority student recruitment, education, and success. Meanwhile, no such expectations are placed on white male faculty. They have the opportunity to set up their laboratories and to establish their research program without the aforementioned responsibilities. Being placed on display is another fate that befalls both women and minority faculty. As one female untenured American Indian woman stated from Turner and Myers (2000), "It's just like when they trot me out for the minority students and they trot me back in. It's the same notion when they need attention....and then they trot me back in when they no longer need me." As a sequitor, there is the added responsibility of being the nonwhite male representative on departmental, college, and university committees.

Once tenure and promotion are achieved, the *associate professor* must continue to excel in scholarly pursuit and to be recognized locally, nationally, and internationally. It is worthwhile to let the administration know and to appreciate the nontraditional road that is taken and to understand the additional pressure not placed on the male faculty members of the majority culture.

With the status of *full professor*, there is burnout. As a default, the faculty member may be offered a quasi-administrative position that will rarely lead to an administrative position with power, especially in the fields of agriculture.

Summary of Strategies

What should be done for all students? Not only do we want students to be successful but, also, to be able to function in a multicultural society both at the college

level and after graduation. We want them to remain in the pipeline. In summary, several suggestions to promote student involvement and interaction are as follows:

Encourage and foster high expectations. Seek out the strengths of the students who may be not doing as well as they could do. Although we want to encourage careers in agriculture, advice may be that their talents fall outside of agricultural sciences.

Mentor and model, especially in agricultural sciences. The field of agriculture has negative connotations for many students. The importance of the science of agriculture should be emphasized. Role models generally share some commonality of gender or ethnicity, but, anyone can be a mentor. According to Gibbons (1992), all that is needed is personal interest that includes personal contact. A mentor brings out the best in the individual being mentored while at the same time, is open to learn something from the individual. It is a partnership of mutual trust that allows both the mentor and the one being mentored to gain from the relationship.

Involvement of undergraduate or potential undergraduate students in research is an excellent way for them to interact with members of a laboratory as well as with a principal investigator. It not only allows involvement but also ownership of one's own education and, by necessity, fosters dialogue.

Many institutions bridging high school to college or baccalaureate programs to graduate or professional schools offer transition programs. Most of them have a 'hands-on' component. High school/secondary education to undergraduate programs range from summer enrichment programs to first-year inquiry or first-year experience courses during the first semester. The activities and courses, offered by these programs, include techniques in study skills, computer technology, interactive learning strategies as well as critical thinking and analyses.

Service learning courses involve students in community service in conjunction with standard classroom lectures. There is a strong emphasis on self-evaluation and reflection as they relate to involvement and interactions with community service patrons.

The goal of these strategies is to break down barriers and to build bridges through dialogue and communication. Other suggestions are outlined by Levey et al (1998).

There are students who will not succeed, for one reason or another, in majority institutions. The attrition rate for African-Americans averages 20% higher than white students. However, many students may shine at a tribal college or Historically Black College/University (HBCU) or Hispanic/Latino/Chicano serving institu-

Table 1. M.S. degrees conferred by degree granting institutions by racial/ethnic group, major field of study and sex of student.

	Total	White non-Hispanic	Black non-Hispanic	Hispanic	Asian/Pacific	American Indians/Alaskan Natives	non-Resident Aliens
Men	2362	1777	52	58	44	19	412
Women	2013	1533	56	51	66	7	300
Total	4375	3310	108	109	110	26	712

tions. As discussed by Gibbons (1992), the extra level of comfort in a welcoming environment with personal attention and role models can boost self-confidence. As an example, HBCU can boast about their successes in sending students on for professional or graduate degrees.

With few 1890 universities, including Tuskegee University, the agricultural sciences see very few of these students in graduate programs. Many of them opt for the biomedical sciences. According to the USDA (2002), the following statistics are summarized in Tables 1 and 2 showing postgraduate degrees in Agriculture and Natural Resources for 1999 to 2000.

In regard to faculty, how can the university, the college, the department, and the new faculty member come to mutual understanding regarding expectations? Dialogue and open communication are the keys to success. It is important to be clear about the goals of the individual and the department as well as how to achieve those goals. For the faculty member, know the rules and if acceptable, follow them. When the rules are contrary to the goals and expectations of the new faculty member, other options in academia, e.g., 2 to 4 yr, public vs. private institutions, should be explored. It is important to be comfortable and in synchrony with the educational environment of the institution. Thus, what should we do for all new faculty? It is important for the new faculty member to retain identity of self and not to feel pressure to conform to all of the established norms. Therefore, the following suggestions are offered:

1. Mentoring by departmental peers or by members of a support group is critical in order to point out the nonspoken and unwritten rules *and* the political climate. As with any new situation, it helps to be associated with someone who is familiar with that environment, whatever gender or ethnicity.

2. Deans, department heads/chairs, and department faculty must communicate expectations. At the same time, the new member must feel at ease articulating his/her expectations.

3. Do not allow the new member to feel isolated. Informal conversation can ease uncertainties regarding the new climate.

4. Racism and sexism are not dirty words. Be willing to discuss these issues. Open dialogue is critical.

5. Understand that like groups will try to find one another and will talk among themselves. It is important that the majority faculty and administrators do not perceive gatherings of like individuals as threats. In fact, such interactions might be encouraged for the establishment of networks.

Other suggestions are found in a handbook offered by the Quality Education for Minorities (QEM) Network (2000). There is a new web site available for minority scientists and would-be scientists, and anyone interested in promoting minorities in science. Those in the field of agricultural and food sciences can provide aspects of applied sciences. The site is <http://www.justgarciahill.org>.

Finally, several of the professional societies from natural and physical sciences have outreach programs providing some combination of scholarships, summer research, mentors, and workshops (Fox 1993). It might be helpful if our agricultural societies investigate those programs and consider a similar approach. Additionally, there is an abbreviated resource guide to minority programs available in Science 1993.

CONCLUSIONS

Mentoring is critical, and anyone, regardless of gender, ethnicity, religion, can be a mentor. For women

Table 2. Doctoral degrees conferred by degree granting institutions by racial/ethnic groups, major field of study, and sex of student.

	Total	White non-Hispanic	Black non-Hispanic	Hispanic	Asian/Pacific Islanders	American Indians/Alaskan Natives	non-Resident Aliens
Men	811	372	14	9	19	1	396
Women	370	187	11	7	14	1	150
Total	1181	559	25	16	33	2	546

and minorities, it is indeed an uphill battle. However, it is important to know that success in academia and in an agricultural science is an achievable goal. Women should be allowed to be comfortable with their femininity and not feel pressured to take on male-type characteristics. Minorities, whether ethnic, cultural, religious, or with alternative life styles should be able to maintain identity without compromising goals and standards of the academic institution. Members of the majority culture must be sensitive to and appreciate those who have distinguishing features that prohibit them from melting into the proverbial pot. A diversity of ideas from men and women from all backgrounds can only help to foster success and advance the agricultural sciences.

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