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The National Academies and the National Institutes of Health Office of Research on Women's Health recently hosted a convocation on "Maximizing the Potential of Women in Academic Science and Engineering: Biological, Social, and Organizational Components of Success." The Committee on Maximizing the Potential of Women in Academic Science and Engineering is chaired by Donna Shalala, now President of the University of Miami but perhaps best known as Clinton's Secretary of Health and Human Services. The Committee is charged with discovering why, despite the fact that women represent an increasing proportion of those earning undergraduate and graduate degrees in science and engineering fields, they have not been hired into academic positions commensurate with this increased representation." The Committee is expected to provide recommendations to faculty, Deans and Department Chairs, Academic Leadership, Funding Organizations, and the US Government, on how to effectively address this disparity. For information on this event, related events, and on-line talks and references from the convocation, see [http://www7.nationalacademies.org/womeninacademe/](http://www7.nationalacademies.org/womeninacademe/).

There were four sessions in the day-long event on 9 December 2005 at the National Academy of Science Building in Washington, D.C. The first session was devoted to presentations and discussion of research on studies of gender differences in cognitive and biological stages of child development. Interesting points included: (a) by and large, once both genders have been trained at whatever task showed a gender difference in performance, that performance difference disappears; and (b) differences in child performance levels by country are highly correlated with the United Nations' measure of "gender equity" in that country. Basically, those countries where men and women have equal access to education are those countries with the smallest performance differences between men and women.

The second session focused on social structures and how social biases may affect individual performance outcomes. Experiments on the so-called "stereotype threat" show that context can change performance, sometimes dramatically for women and minorities. For instance, a simple change in test description from "math ability" to "problem solving" is the difference between men doing better than women on the test (former) and women doing better than men on the test (latter), apparently because any descriptor which plugs into stereotypes and/or reminds a woman or minority of their status in society lowers their performance. Recommendations to combat stereotype threat include creating a threat-free environment, emphasizing skill over ability, and emphasizing the external-ness of stereotypes so that mental resources which would otherwise be wasted on anxiety can be used for problem solving.

Surveys show that society tends to view women in positions of power with ambivalence. The more women are respected, the less they are liked, and vice-versa. Similarly, warmth and competence are seen as inversely correlated in women leaders. The recommendation is that organizations should expand their criteria for measuring success in order to take this social bias into account.

One dramatic point made in this session was that people in positions of power are most vulnerable to their own internal biases (which everyone has to one extent or another) because they receive the least amount of honest feedback from others. The solution to this is more and better accountability.

The third session was devoted to organizational structures in science and engineering, for the most part concentrating on how they may directly or indirectly discourage women from having children. This in turn causes large numbers of women who want children to leave fields (such as science and engineering) where having children is least supported at the organizational level. Caregiver discrimination cases are on the rise, and enjoy a higher success rate than other civil rights cases. Suggestions for improving the situation include encouraging the use of EOWA free on-line software to do workplace analyses, and to reward those who supervise successful women.
The fourth session was on "Implementing Policies." Supportive leadership is critical to implementing policies designed to increase the representation of women and minorities in science and engineering faculty. Interestingly, freshman African American women show a higher interest in science and engineering than African American men. The "First Law of Diversity" was introduced in this session, which says that anytime something bad happens in any organization, it is worst for those who are in the minority.

Recommended actions include: having zero tolerance for bullying behavior; confronting those who are abusive; understanding that tenure is not a license to kill; learning how to deal with conflict by taking a class, getting help, and seeking support; and supporting your local senior feminist (both male and female) colleagues.

The entire Committee then took questions from the audience. Since another item in its charge is, "...to examine how funding organizations ... can best maximize the potential of women in science and engineering" I asked the Committee to collect data on funding agency practices to measure any biases which may exist in the awarding of grants by these agencies. I pointed to the GAO's concerns expressed in their report, "Women's Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX," along with the RAND Research Brief "Is There Gender Bias in Federal Grant Programs?" Both speak of difficulty in obtaining the necessary data from some agencies. Clearly the question of whether bias on the part of funding agencies exists cannot be answered without this data. Hopefully the funding agencies will respond positively to the Committee's requests for such data.

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