

Moving on from discrimination at the Massachusetts Institute of Technology

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Most of us have grown up hearing stories of gender bias and glass ceilings. We wonder how much these biases and ceilings affect our own lives.

Women are no longer barred from entering fields that interest them; however, along the way they encounter hurdles that make their progress more difficult. Most of these hurdles are not gender-specific. Some men encounter them too. The bias is that women encounter them more consistently than do men. Some men -- and even a few women -- regard these hurdles as the expected lot of women. It is not easy to obtain an accurate measure of the effects of gender bias. No single individual can be sure that the behaviour she encounters is not somehow provoked by her own behaviour. Bias becomes apparent when there is a consistent pattern of behaviour towards an entire group.

Five years ago the 15 women who at that time constituted the tenured women faculty of the School of Science at the Massachusetts Institute of Technology decided to try to obtain quantitative data to either support or refute anecdotal stories of gender bias. The group had several advantages for the case study: the 15 member group was large enough to reveal patterns of behaviour, although it was less than 8% of the total tenured faculty of the School of Science (which then numbered 209). All of the women were scientists who managed research teams in addition to teaching undergraduate and graduate students. The women represented all except one of the six departments in the School of Science (the mathematics department had no senior women faculty member at that time). Although they were in different fields they had very similar goals and similar problems. In addition, these women had easily quantifiable measures of success in their lists of honours and awards, papers published, grants obtained, and offices in professional societies.

The study proved to be a monumental undertaking. In response to a request from the women, the Dean of the School of Science, Robert Birgeneau, appointed a committee made up of one tenured woman from each department, plus three men (who were current or former department chairs). This committee spent two years collecting data. They looked at salaries, laboratory space and other resources for research, the amount of salary that individuals raised from research grants, teaching assignments and other obligations to the department, committee assignments, and the award of named chairs and prizes. In addition, the committee looked at the numbers of men and women faculty, students and postdoctoral researchers over the previous 10 years. They interviewed senior women faculty members as well as department heads from the School of Science. Many of the junior workmen agreed to be interviewed, even though the committee was aware that they might not feel completely free to speak about their problems. Although the study was directed at the entire group of senior women faculty in the School of Science, it was necessary for the primary data to be examined rigorously by individuals who were deeply knowledgeable about each field and each department.

The study did reveal inequalities. The MIT administration has moved effectively to correct many of them. Some salaries were raised and in some cases money was added to pensions. Specific problems of space and resources have been corrected. It is important to remember that inequities affect not only the present but also the future. The current salary affects the pension. The lack of research space, time and resources affects the quality of the research and thus the ability to win support for future research.

Although not as quantitative as data on access to resources, the results of the interviews provide compelling pictures of the lives of women faculty. Junior women felt included in and supported by their departments. Their most common concern was the extraordinary difficulty of combining family and work. However, as women progressed through their careers at MIT they became increasingly marginalized and excluded from positions of real power in their departments. An important finding to emerge from the interviews was that the difference in the perception of junior and senior women faculty about the impact of gender on their careers is a difference that repeats itself over generations. Each generation of young women, including those who are currently senior faculty, began by believing that gender discrimination was **◆solved◆** in the previous generation and would not touch them. But gradually their eyes were opened to the realization that the playing field is not level after all, and that they had paid a high price, both personally and professionally, as a result.

We applaud the President of MIT and the Dean of the School of Science for their response to the women faculty but we know that this problem will not have a fast permanent solution. Bias is subtle and largely unconscious. The most lasting correction will come only when the numbers of women in science and engineering have grown significantly. For this to happen it is important that the women who are already in the system become an integral part of it: treated equitably and included in decision-making roles at every level of the institution.

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