



Career Advice for
Women and Men

**[H]ow do we
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on implicit bias
will catalyze the
changes we seek?**

Gender Bias: How to Break the Habit

If we can't eliminate implicit bias, we can teach people the personal and structural actions they can take to neutralize its impact.

Implicit bias is the buzzword of the moment. Departments, universities, medical schools, hospitals, companies, police departments, professional societies—all are reaching out to anyone offering any sort of education about implicit bias for their members.

August bodies such as the National Institutes of Health (NIH),¹ the National Academies,² and the National Science Foundation³

have all pointed to implicit bias as one of the important factors contributing to the loss of women in science, technology, engineering, mathematics, and medicine (STEMM) careers. Current campus activism and protests—primarily by undergraduate students of color but including all academic personnel concerned with the lack of diversity and inclusive climates—have also brought attention to the role of implicit bias in creating inequitable conditions. It is not surprising that organizations are looking for education on the topic in the hopes of improving the climate and overall diversity of their workplaces.

At the same time, how do we know that a focus on implicit bias will catalyze the changes we seek? Surely there is more than implicit bias at play in creating the wide disparities we see—for example, the fact that about 53% of PhDs in biology go to women, but only 46% of assistant professors and only 31% of associate professors of biology in U.S. universities are women.⁴ If an organization invests in implicit bias education for its members, what can it expect in return?

What Is Implicit Gender Bias?

Humans process information not only in the conscious, intentional, *explicit* way that we typically think of when making

decisions or speaking our minds, but also in an unintentional, unconscious, *implicit* way.^{5,6} In the case of unconscious gender bias, preconceptions based on common societal gender stereotypes filter our processing of information. For men, the common stereotypes are described as “agentic”—possessing action-oriented qualities such as being strong, decisive, risk-taking, and independent. Women are

typically stereotyped as “communal”—possessing interpersonal qualities such as being kind, supportive, nurturing, and caring. Because of the unconscious application of these stereotypes, identical information about a man and



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a woman is perceived, interpreted, and acted upon differently. This process is almost always unintentional and occurs without awareness. STEMM fields have typically been populated by men and are assumed to require agentic qualities for success. This creates a problem for women because stereotyped assumptions about women, applied unconsciously, can limit their opportunities and diminish their perceived competence in the field.

What Does It Take to Reduce or Eliminate Implicit Gender Bias?

Breaking the “habit” of unintentionally applying stereotyped assumptions about individuals requires more than good intentions. Like when breaking any bad habit, one must be motivated to act without bias, one must have the knowledge and ability to know when implicit bias is at play, one must have the skills to break the habit, and one must then engage in deliberate practice to break that habit. In 2010–2012, with funding from the NIH, our team developed a 2.5-hour workshop to provide participants with the motivation, knowledge, skills, and practice needed to assist university STEMM faculty in their goals to break the habit of implicit gender bias.^{7,8} More information about the workshop we implemented, including



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information on how to obtain the workshop materials, is available on our website: <http://wiseli.engr.wisc.edu/breakingbias.php>.

Motivation. To motivate our participants to want to engage in bias-breaking actions, we asked them to take an online Implicit Association Test (IAT), a timed sorting task.⁹ The IAT we used was directly related to the subject of women and leadership. (There are many IATs that could motivate someone to explore their own biases.) Especially among people who pride themselves as being objective, rational scientists, it can be highly motivating to uncover the unflattering reality that one has implicit biases that disadvantage groups of people. We also motivated attendees to work on their own implicit biases by showing the impact of these biases on outcomes and processes important to them (e.g., publishing¹⁰ and obtaining grants¹¹).

Recognizing Implicit Bias in the Workplace. We presented our workshop participants with six “bias constructs”—common manifestations of implicit gender bias in academic workplace settings. For each construct, we provided a definition and an example from either an empirical study or real life. Participants practiced recognizing these biases in typical academic settings by working through case studies together. Just as physicians must diagnose a disease before they can properly treat it, we provide participants with the ability to recognize and name implicit gender biases so they can take corrective action to reduce or eliminate the bias. Although our motto has been “if you can name it, you can tame it,” studies show that if participants leave the workshop only understanding that we all have implicit bias, they are likely to act more biased than if they had never participated in the training at all!¹² Thus, it is essential to provide tools the participants can use to reduce their bias.

Bias Reduction Strategies. The practical, specific bias-reducing actions offered by our workshop included structural changes that can be made to reduce bias as well as actions that each individual can take. Examples of structural changes include critically examining the physical environment—are there social cues such as the pictures on the wall that could trigger stereotypes?—and establishing clear criteria for a successful applicant before your search committee reviews any candidates. For

individuals, we stressed five “personal bias reduction strategies”:

1. Stereotype replacement—recognize when you are having a stereotyped thought and consciously replace it with accurate information. For example, if you catch yourself thinking that girls are bad at math, replace that thought with the reality that there are no gender differences in math achievement once the number of courses taken is controlled.

2. Counterstereotype imaging—imagine in detail a positive example of a person from a stereotyped group who is effective in their role. Think about an exemplary woman scientist you respect prior to evaluating job applications for a new faculty position.

3. Individuating—gather specific information about an individual from a stereotyped group to prevent group stereotypes from filling in gaps in information. For example, make sure that men and women applicants for a leadership position have the opportunity to demonstrate both their communal *and* their agentic characteristics.

4. Perspective-taking—imagine in detail what it is like to be a person from a negatively stereotyped group. Imagine what it feels like to have your ideas ignored or to be passed over for a networking opportunity because it involves travel.

5. Increase opportunities for contact—pursue authentic relationships with positive counter-stereotypic individuals. Meet with senior women faculty to discuss their ideas and visions for the future.

We encouraged participants to reflect on the strategies and to consider which strategies they could use or adapt in their everyday life. We then asked each participant to write down a “commitment to action” on how they will specifically use at least one of the strategies in both their work and non-work lives.

What Changed When Faculty Received Implicit Gender Bias Education—and What Didn’t Change?

At the University of Wisconsin-Madison, we pair-matched 92 departments (or department-like units) and randomly selected one department in the pair to receive the workshop, while the other department was a waitlist control (that is, we offered the control

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departments the workshop *after* all of our measurements had been taken). We found no decrease in actual IAT scores from a gender- and-leadership IAT, nor did we find any differences between experimental and control groups in their IAT scores. This means that the workshop did not actually reduce the underlying implicit bias that more strongly associates men with leadership and women with supportive roles.

Importantly, however, participation in the workshops did change how faculty addressed and reduced those biases when they appeared. Compared with faculty in control departments, those in departments that received the workshops showed an increase in their awareness of implicit bias, motivation to act without bias, and self-efficacy to engage in bias-reduction techniques three months after the workshop. Furthermore, if 25% or more of the faculty in the department attended the workshop, those departments reported more actions to reduce bias.

We have documented even longer-term benefits of the implicit bias workshop as well. Both male and female faculty in the 46 experimental departments assessed the climate in their department as having improved significantly compared with faculty in the 46 control departments in a separate postal survey of all faculty at the University of Wisconsin-Madison¹³ over a year after the intervention. Finally, patterns of faculty hiring one to three years post-workshop suggest a greater percentage of women were hired in the experimental departments compared with the control departments.

Our Recommendations

Many companies and independent consultants are offering “implicit bias”

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training, and organizations desperate to eliminate such bias from their spaces are jumping on the bandwagon. Our study shows that implicit bias education *can* make positive changes in one’s application of bias as well as in one’s workplace climate. However, before you invest in this sort of education in your own units, we recommend that you take a close look at what is being offered. What kind of stereotype-based biases will be covered? Will the group be properly motivated to understand why they should take a look at their own biases? Is the material presented in a way that reduces *blame* for having implicit bias, while at the same time encouraging participants to take *responsibility* for reducing it? Most importantly, will the workshop include specific strategies that are targeted to their organizations and/or their own lives that participants can use to reduce the bias? Many educational modules leave out this important step. With education and practice, we can reduce the gender bias habit! ■

—Jennifer Sheridan and Molly Carnes, University of Wisconsin-Madison

References and Footnotes

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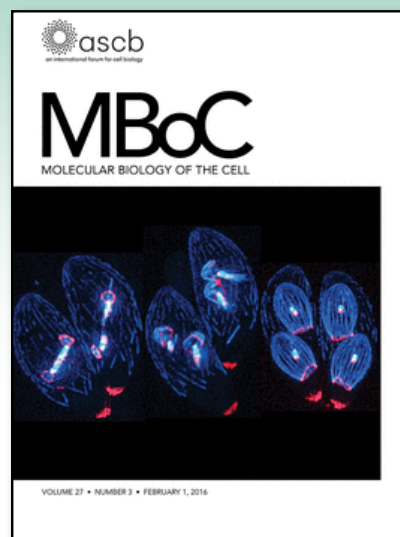
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