

# Biased Evaluation Committees Promote Fewer Women

If members don't explicitly believe gender discrimination exists, they allow implicit stereotypes to sway their decision-making, according to a new analysis of real-world hiring decisions.

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**E**valuation committees that hold implicit biases against women in science promote fewer women than men to elite research positions—but only if they don't explicitly believe that gender bias exists, researchers reported today (August 26) in

*Nature Human Behavior*. According to their analysis of real-world hires at France's national research agency, when committees acknowledge that bias may color their decision-making, the link between their implicit stereotypes and promotion decisions disappears.

"We know that implicit biases are very powerful, but we can counter this bias," says coauthor [Isabelle Régner](#), leader of the cognitive and social neuroscience team at Aix Marseille University. "You must recognize and be convinced that [gender bias] still exists today" to control for implicit attitudes against women in STEM fields, she says.

Régner and her colleagues observed how implicit biases drove real-world promotion decisions during an annual nationwide competition for research director roles in France. The competition, conducted by the Centre National de la Recherche Scientifique (CRNS), encompasses many disciplines, including the physical, life, and social sciences as well as mathematics. About half of the evaluation committee members agreed to participate in the study, providing the authors a sample of more than 410 people from 39 different committees.

The authors note that this moderate participation rate still surpasses that seen in other [academic investigations](#) of gender bias, which hover around 30–35 percent. These prior studies drew conclusions from mock-hiring scenarios that did not affect real peoples' careers; CRNS committee members may have been reluctant to report on their attitudes and beliefs given the high stakes of their task, the authors explain.

The study took place in 2010 and 2011, during

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**Committees that acknowledged their potential bias promoted equitable numbers of men and women in both years.**

which time the evaluation committees remained the same. In the first year, participants completed the Implicit Association Test (IAT) and a questionnaire examining their explicit beliefs. The IAT measures how quickly respondents sort words into distinct categories; for instance, they may be asked whether “science” should be labeled as “masculine” or “feminine.” The explicit questionnaire asked why participants believed gender disparities exist in science, whether they are due to external barriers, family constraints, or gender differences in ability, for example. Scores on the IAT and questionnaire were averaged within committees to create a group profile.

The committees’ final promotion decisions were not reminded of the study, and their biases became apparent.

Averaged IAT scores revealed that both basic and academic disciplines, associating “humanities” on the other. On average, gender discrimination contributes to committees promoted fewer women.

Participants forgot their decisions were being scrutinized. Committees that acknowledged their potential bias promoted equitable numbers of men and women in both years.

“This suggests that raising people’s awareness of the data can move the needle towards equity,” says [Jennifer Raymond](#), a neurobiologist at Stanford University who was not involved in the study. Although biases against women remain prevalent in STEM fields, some argue that scientists are trained to be objective and are therefore above the influence of implicit beliefs, she says. The data suggest otherwise.

In August 2018, Raymond helped uncover how gender bias slips into the [peer review process](#) at the journal *eLife*, for which she is an editor. The study revealed an in-group bias, where men were more successful than women when the reviewers were all male, and had more similar success rates to women when there was a mixed review panel. Similar preferences extended to other demographics, such as people from the same country.

“This is not just a women’s issue, it’s the issue that everyone wants to be judged on the quality of their work,” she says. But peer review, like hiring and promotion, “is not the meritocracy that we aspire for it to be.”

The CRNS study highlights the persistence of gender discrimination in science, and underscores its ubiquity across many fields.

“It’s really across all disciplines—this shows that it’s not just a problem of this discipline or that discipline,” says [Sandro Tacchella](#), a postdoc at the Harvard-Smithsonian Center for Astrophysics who was not involved in the study. In 2017, Tacchella coauthored a quantitative study that highlighted the [disparity in citation counts](#) between astronomy papers written by women and those written by men. The team devised machine learning algorithms that revealed that men’s papers were cited about 10 percent more often than women’s were, even when they shared the same non-gender-specific properties.



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At Harvard, Tacchella participates in the [Equity and Inclusion Journal Club](#) that he says helps spark discussion about underrepresentation in science. The trouble is that not everyone attends.

“Many times it’s people that are already interested and are aware of the problem,” says Tacchella. To reach those at the top, including those involved in hiring and promotion decisions, he suggests that bias training would have to be made mandatory and all committee members should be “required to be up to speed with the literature.”

Régner suggests that a “habit-breaking intervention,” such as that described by the University of Wisconsin–Madison’s [Patricia Devine and colleagues](#), might help to facilitate gender equity at academic institutions. In these sessions, participants are made aware of their implicit biases and learn strategies to counter them. This year, the CNRS began offering training sessions on gender stereotypes to evaluation committee members and each committee has appointed a reference person in charge of gender equality issues. Raymond tells *The Scientist* this self-evaluation and corrective action should take place at all academic institutions, but may be a long time coming.

“It’s hard to understand given what’s at stake . . . why institutions are so reluctant to really ask themselves whether their processes are as optimal and unbiased,” says Raymond. “The CRNS should really be commended for putting this out there, and I think it’s important for more institutions to follow suit because we’re still in the stage of recognizing that this is a problem.”

**I. Régner et al., “Committees with implicit biases promote fewer women when they do not believe gender bias exists,” doi:10.1038/s41562-019-0686-3, *Nat Hum Behav*, 2019.**

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