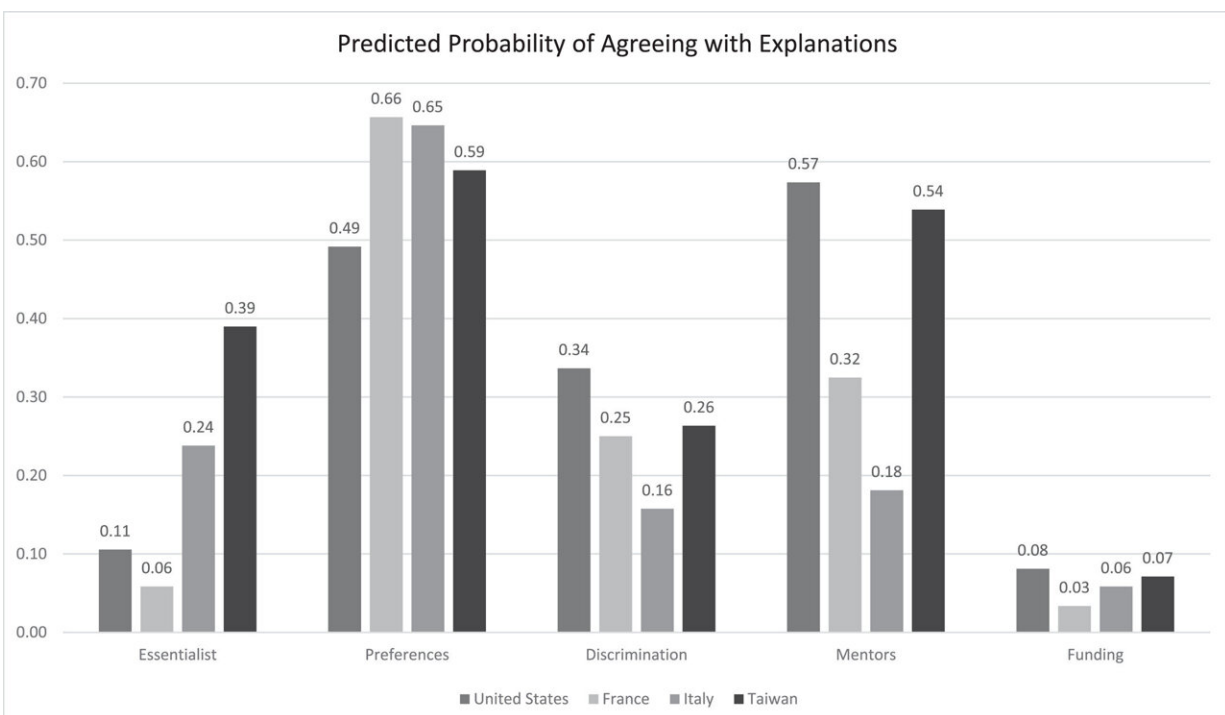


Scientists believe lack of women in physics tied to personal preference, but this ignores gender norms: Study

December 7 2023, by Amy McCaig



Predicted probability of agreeing with explanations. Credit: *Gender, Work & Organization* (2023). DOI: 10.1111/gwao.13076

Fewer women pursue careers in physics than biology, and scientists from around the world believe these differences come down to personal preferences, according to a new Rice University [study](#) of international

scientists. The study's researchers warn that merely chalking this imbalance up to individual choice may diminish the push for gender equality in the sciences.

"Scientists explain the underrepresentation of women in physics compared to biology in four national contexts" appears in a recent edition of *Gender, Work & Organization*. Using [survey data](#) collected from academic biologists and physicists in the U.S. (1,777 total), Italy (1,257), France (648) and Taiwan (780), the researchers examine how scientists' social identities and the countries in which they reside shape their explanations of [gender inequality](#) in [science](#).

Elaine Howard Ecklund, one of the study's authors and the Herbert S. Autrey Chair, professor of sociology and director of Rice's Boniuk Institute, said regardless of the scientists they surveyed, the decisions of women to not pursue careers in physics were interpreted by the respondents through a lens of individualism.

The danger in this, Ecklund said, is ignoring the way preferences themselves are shaped by gendered processes. For example, previous studies have demonstrated that women are more likely to be excluded from professional networks because of their [gender](#), penalized for being or potentially becoming mothers and not having sufficient access to professional mentoring—all of which are factors that can affect the choices they make for pursuing or avoiding a particular field of science.

"These barriers ultimately prevent women from entering, persisting and advancing in academic science along different points in the pipeline," noted Di Di, one of the study's lead authors from Santa Clara University.

Ecklund further noted how gendered processes are at work long before women make decisions about their field of study, families or other aspects of life. Prior research suggests women are influenced early on by

their parents' gender roles in the family and their occupations, which shape young women's decisions to go into fields like science, technology, engineering, math and other gendered occupations. These occupational selections are viewed as individual choices by scientists surveyed for this study.

"When scientists draw on individualist arguments to explain gender inequality—thus ignoring these gendered processes—they may blunt initiatives that can promote [women](#)'s equity in STEM," said Esther Chan, one of the lead authors of the study from the University of Wisconsin-Milwaukee.

More information: Esther Chan et al, Scientists explain the underrepresentation of women in physics compared to biology in four national contexts, *Gender, Work & Organization* (2023). [DOI: 10.1111/gwao.13076](#)

Provided by Rice University

Citation: Scientists believe lack of women in physics tied to personal preference, but this ignores gender norms: Study (2023, December 7) retrieved 27 April 2024 from <https://phys.org/news/2023-12-scientists-lack-women-physics-personal.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--