

Politics and Prejudice: How Diversity Shapes Scientific Progress



October 4, 2017

Introduction

What does a scientist look like? If a group of children are asked this question, they all have similar answers - a middle-aged Caucasian man wearing glasses and a white lab coat. Indeed, in reality, nearly 50% of all people working in the fields of science and engineering are white males. Ideally, science would work as a meritocracy; the smartest scientists with the most ingenious insights into how the world works would guide how the rest of the field thinks. It is clear, however, that science is not the perfect meritocracy it is idealized to be - there are real obstacles to becoming a successful scientist from some backgrounds. Barriers such as race, gender, and class prevent countless people from becoming scientists. To do the best, most comprehensive science, we need diverse scientists, from all backgrounds and representing all viewpoints. After all, scientists are only human, to discover the Truth that science seeks, we need scientists from every background.

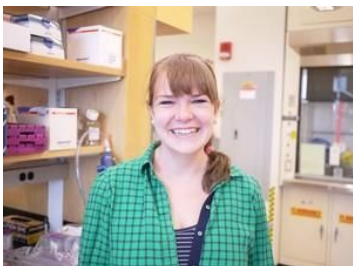
Speakers



Maddy Jennewein is a fourth year graduate student in the Virology program. She studies the transfer of immunity from mother to child during pregnancy in the lab of Dr. Galit Alter. Outside of lab she runs the student group for LGBT graduate students at Harvard, is an editor for the Journal of Emerging Investigators and coordinates lectures for the science policy group. Every summer for a week she teaches at a youth science camp. In her free time she likes to read and rock climb.



Jacob Quinn Shenker is a second year graduate student in the Systems Biology program working in Dr. Johan Paulsson's lab, where he studies how bacteria evolve using math, microchips, and lasers. He spends his free time beating his brother in card games and thinking about how to use science and statistics to craft better public policy.



Kate Lachance is a third year graduate student in the Bioinformatics and Integrative Genomics program. She studies transcription elongation dynamics, using computational methods to process large amounts of biological data from yeast and humans, in the lab of Dr. Stirling Churchman. In her spare time, Kate also volunteers in Cambridge public 8th grade classrooms during their evolution and genetics unit, is a co-chair for the Harvard Graduate Women in Science in Engineering (HGWISE) mentoring program, and enjoys baking!

Glossary of Important Terms

Correlation: A statistical measure that indicates the extent to which two or more variables fluctuate together

Diversity: The condition of having or being composed of differing elements, especially the inclusion of different types of people (such as by race, religion, color, gender, nationality, sexual orientation, age, education, and skills) in a group or organization

Gene: The genetic material transferred from parent to offspring and determines some characteristic of the offspring

In-group: An exclusive group of people with a shared interest or identity

Intervention: An action taken to improve a situation

IQ: A number purporting to represent a person's reasoning ability, measured using problem-solving tests, as compared to other people their age

Meritocracy: The system in which the holding of power by people is selected on the basis of their ability and talent rather than on class privilege or wealth

Out-group: The group of people who do not belong to the specific in-group

Stereotype: A widely held but fixed and oversimplified image or idea of a particular type of person or thing;

Stereotype threat: The risk of confirming negative stereotypes about an individual's racial, ethnic, gender, or cultural group

Resources to learn more

How Diversity Empowers Science and Innovation, Scientific American Special Report,

<https://www.scientificamerican.com/report/how-diversity-empowers-science-and-innovation/>

Damore's Google Memo: "Science doesn't explain tech's diversity problem—history does" (Sarah Jeong and Rachel Becker), <https://www.theverge.com/2017/8/16/16153740/tech-diversity-problem-science-history-explainer-inequality>

"There's still no good reason to believe black-white IQ differences are due to genes" (Eric Turkheimer, Kathryn Paige Harden, and Richard E. Nisbett)

<https://www.vox.com/the-big-idea/2017/6/15/15797120/race-black-white-iq-response-critics>

Follow the News- Science in the News

Upcoming SITN Events



October 11 - The Genetic Engineering Toolbox: A Whirlwind Tour of GMO Technology

October 18 - From Microwaves to Microbreweries: The Science Behind our Food

Want to watch this seminar again and check out other SITN seminars?

Check out our YouTube <https://www.youtube.com/user/SITNBoston>, Vimeo <http://vimeo.com/sitn>, and website <http://sitn.hms.harvard.edu/category/seminars/>

Go to the SITN homepage <http://sitn.hms.harvard.edu> for more information about our organization and upcoming events.

facebook.com/SITNBoston

SITNBoston@gmail.com