WWEST
Westcoast Women in Engineering, Science and Technology

NSERC CRSNG
Chairs for Women in Science and Engineering
Chaires pour les femmes en sciences et en génie

Unconscious Bias

Unconscious bias refers to the assumptions and conclusions we jump to without thinking.[1]

An example might be assuming that an older person walking with a child is their grandparent. These biases do not indicate hostility towards certain groups; they reflect how the individual has been socialized.

Several studies demonstrate the impact unconscious bias can have on the hiring process, particularly for women.

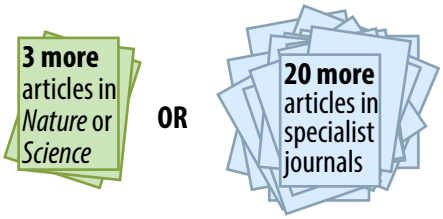
Try the Implicit Bias test: https://implicit.harvard.edu/

These biases may not be intentional, but their impact is severe. The effects of unconscious bias will not be overcome by maintaining our current efforts to recruit and retain more women.[2]

To reduce unconscious bias in hiring, committees and individuals need to be educated about its existence and effects in academia and industry.

Online tools such as the Harvard Implicit Association Test can help identify an individual's unconscious biases. Sharing research and becoming aware of your organisation's hiring tendencies can also help reduce unconscious discrimination.

To be seen as equally "**competent**" by reviewers, female researchers need to publish:



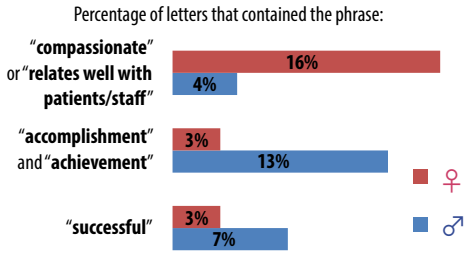
than male applicants when applying for a medical fellowship.[5]

"We would have to see her job talk"

"I would need to see evidence that she had gotten these grants and publications on her own"

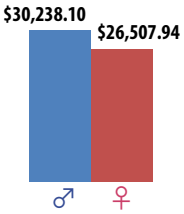
Psychology professors reviewing identical CVs were **4x** more likely to write **cautionary comments** for female applicants.[4]

Reference letters for female medical faculty were **shorter**, more **vague**, and placed **less emphasis on research** than those for males.[6]



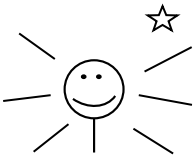
The average letter length for women was **227** words, compared to **253** words for men.[6]

US science professors were asked to evaluate a CV for a **lab manager**: [2]

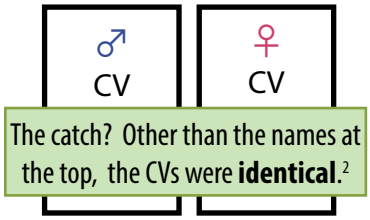


The male candidate was offered a **higher salary**...

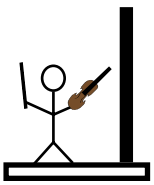
... more **mentorship**



... and was rated more "**competent**" and "**hireable**."



The catch? Other than the names at the top, the CVs were **identical**.[2]



Women are **50%** more likely to advance in an orchestra audition if they **can't be seen**.[3]

More information and resources at: www.wwest.ca

WWEST 2010-2015

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References

1. Network Exchange. (2012). *Unconscious bias.* Retrieved from: http://online.fliphtml5.com/hcxu/wfbe/#p=6
2. Moss-Racusin, C. et al. (2012). Science faculty's subtle gender biases favor male students. *Proceedings of the National Academy of Sciences of the United States of America*, *109*(41), 16474-16479.
3. Goldin, C. & Rouse, C. (2000). Orchestrating impartiality: The impact of "blind" auditions on female musicians. *The American Economic Review, 90*(4), 715-741.
4. Steinpreis, R., Andres, K. & Ritzke, D. (1999). The impact of gender on the review of the curricula vitae of job applicants and tenure candidates: A national empirical study. *Sex Roles*, *41*(7/8), 509-528.
5. Wennerås, C. & Wold, A. (1997). Nepotism and sexism in peer-review. *Nature, 387*, 341-343.
6. Trix, F. & Psenka, C. (2003). Exploring the color of glass: Letters of recommendation for female and male medical faculty. *Discourse & Society,* 14(2), 191-220.

Recommended Readings

1. Coorice, A. (2009). Unconscious bias in faculty and leadership recruitment: A literature review. *Association of American Medical Colleges Analysis in Brief, 9*(2).
2. Harvard Implicit Association Test: https://implicit.harvard.edu/
3. Bertrand, M. & Mullainathan, S. (2003). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *The American Economic Review, 94*(4), 991-1013.
4. Fine, E. & Handelsman, J. (2006). *Reviewing applicants: Research on bias and assumptions.* Women in Science & Engineering Leadership Institute (WISELI) University of Wisconsin-Madison. Retrieved from http://wiseli.engr.wisc.edu/docs/BiasBrochure_3rdEd.pdf

More resources can be found at: http://wiseli.engr.wisc.edu/

About WWEST 2015-2020

Westcoast Women in Engineering, Science and Technology (WWEST) is the operating name for the 2015-2020 NSERC Chair for Women in Science and Technology (CWSE), BC and Yukon Region. Our mission is to promote science and to engage students, industry, and the community to increase the awareness and participation of women and other under-represented groups in science, technology, engineering, and mathematics (STEM). WWEST works locally and, in conjunction with the other CWSE Chairs, nationally on policy, research, advocacy, facilitation, and pilot programs that support women in science and engineering.

About the 2015-2020 WWEST Chairholder

Dr. Lesley Shannon P.Eng is an Associate Professor and Chair for the Computer Engineering Option in the School of Engineering Science at Simon Fraser University. Dr. Shannon studies computer systems design. She works in a rapidly growing field that combines custom computing hardware and software to design and implement application-specific computer systems for applications in a wide range of areas including robotics, machine learning, aerospace and biomedical systems, multimedia applications, and cloud computing. She teaches both undergraduate and graduate students in the area of Computer Engineering; she received the 2014 APEGBC Teaching Award of Excellence in recognition of her classroom and out-of-class mentoring activities and her contributions in leading a redesign of the School's undergraduate curriculum at SFU. Dr. Shannon has long been an advocate of increasing the diversity of students and workers in science- and engineering-related fields and was instrumental in developing programs to support a successful transition from high school into university.