

UNCONSCIOUS BIAS IN THE SELECTION PROCESS

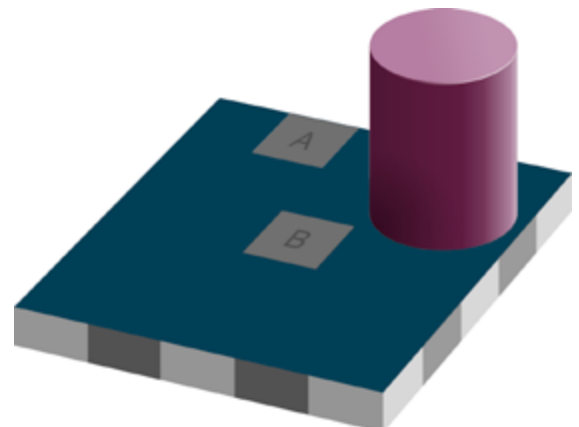
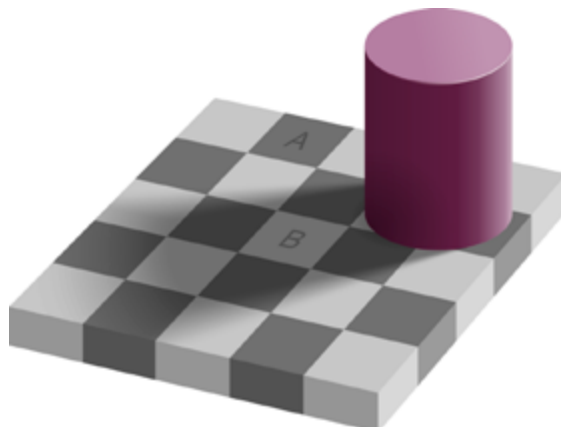
UNCONSCIOUS BIAS

An unconscious bias can unintentionally and unwittingly arise in the mind of any individual, in the form of prejudice, stereotyping, an assumption, a motivation or an implicit attitude.¹

Example of Adelson's checker-shadow

The brain has been found to automatically create shortcuts in order to analyze situations and quickly access information. These shortcuts reportedly use known categories such as stereotypes and perceptions in order to interpret the world.² Applying this explanation to Adelson's chessboard, an optical illusion that involves brightness and contrast, due to our brains' rapid information processing, we tend to think that squares A and B in the first image are not the same colour—the brain is fooled by the presence of the cylinder's shadow.

Having perceived the pattern of alternating dark and light squares, our brain automatically fixes the "mistake" that the shadow seems to produce, by lightening square B. This is how unconscious bias works. However, with conscious reasoning, which requires more control and effort, the brain is able to make a more complex analysis that sets aside shortcuts.² Indeed, in the second image in the figure, if we take the time to examine the board and isolate the squares, we can realize the error... and prevent errors in other similar situations!



DID YOU KNOW?

The following facts drawn from the literature speak to the impact of unconscious bias in the selection process. According to the cited references:

- Although people in academic settings tend to think that they are able to judge others objectively on the merits of their skills, they may in fact be influenced by various unconscious biases surrounding physical or social characteristics (e.g., related to ethnicity, gender, or home institution) that have nothing to do with people's qualifications yet nevertheless shape the evaluation process;³
- Similarity bias may generally cause evaluation committee members to favour someone who is similar to them and to disadvantage someone who is different from them;⁴
- There are believed to be several other types of unconscious biases that can have an impact on application evaluations (see pages 6 to 8 of the [unconscious bias and recruitment document](#) [French only]);
- It has been found to be possible to have unconscious biases toward one's own group¹ (e.g., a woman may have internalized stereotypes about women, and an immigrant may have prejudices toward people who share her background), since these biases are the result of a social construction⁵ (see the [Unconscious Bias White Paper](#) for more information);
- Bias has been found to have less negative influence when designated-group members make up more than 25% of the applicants;³
- Historically, in Canada, Indigenous people are believed not to have had access to the same chances or the same opportunities as non-Indigenous people, because they have been marginalized, excluded and disadvantaged by systemic barriers and prejudices;¹
- Persons with disabilities are reportedly among those most often excluded from the active labour force because of prejudice and stereotypes (e.g., the notion that everyone with a disability needs some kind of assistance, service or special setup to be able to work);⁶
- What is considered "professional" has been found to be often rooted in cultural stereotypes detrimental to the diversity of gender identities and expressions (e.g., expecting a certain haircut or style of clothing based on the candidate's gender);^{7,8}
- Women have been found to often be faced with the phenomenon of the double bind: "Research has shown that incongruities between perceptions of female gender roles and leadership roles can cause evaluators to assume that women will be less competent leaders. When women leaders provided clear evidence of their competence, thus violating traditional gender norms, evaluators perceived them to be less likeable and were less likely to recommend them for hiring or promotion"⁹ (p. 5);
- A Harvard Business School study found that, faced with the same resume, individuals were more likely to like and want to work with a male candidate named Howard than a female candidate named Heidi, even though she was deemed to be equally qualified.² Other studies in Canada, the United States and Europe showed that a foreign-sounding name (Arabic, African, Asian, etc.) limited the chances of being offered an interview;¹⁰

- When evaluators are distracted, they have been found to generally give a higher score to men than to women for the same evaluation.¹ This can be explained by the fact that, when someone cannot fully concentrate on a task, they may rely more on unconscious biases;¹¹
- The influence of unconscious bias and prejudice diminishes when evaluators are held accountable for their evaluation and must justify their decisions;³
- A structured interview is a more objective evaluation method that promotes equal opportunity and reduces the influence of unconscious bias.¹²

RECOMMENDATIONS

The following examples of practices aimed at avoiding unconscious bias are provided for inspiration.

Organizing the selection process

- Strive to increase the number of designated-group members among the pool of candidates^{3,4} (see the [posting design and advertisement pamphlet](#) for more information);
- Identify and rank the evaluation criteria in order of priority before reviewing applications;³
- Refrain from including criteria or asking questions that could be discriminatory regarding subjects protected by the *Charter of Human Rights and Freedoms* (e.g., about age or disability);⁴
- Make sure excellence indicators in the evaluation criteria are free of unconscious bias;¹
- Form a diverse hiring committee;¹³
- Train the evaluation committee members or raise their awareness about the various unconscious biases and their impacts^{CWSE} (see training available online for more information: [Canada Research Chairs](#) and [RIQEDI](#));
- Make sure that the evaluation committee members are up to date on the policies surrounding EDI;⁷
- Use a structured interview;¹²
- Properly manage any appearance of bias that may exist prior to or that may emerge during the hiring process.¹³

Selection Committee

- Take the [Implicit Association Test](#) in order to recognize and control your biases;^{1,14}
- Accept the presence of unconscious bias in your own mind, regularly question your own beliefs and convictions, and be open to feedback;¹⁵
- As the chair of a selection committee, lead by example by naming your desire to recognize and control your own unconscious biases;¹⁴
- Apply the evaluation criteria uniformly to each application.^{1,3} However, it is also important to take into account each person's particular circumstances to ensure that the assessment is equitable (e.g., regarding their vision of their integration into the department and the faculty, an external candidate must be evaluated equitably with respect to an internal one, given that they have a different knowledge of this environment);^{CWSE}
- Regularly challenge one's own judgments during the evaluation process (e.g., is there currently a bias in play?);^{1,3}
- Make sure that each committee member has the opportunity to speak up on each application;⁴
- Allow enough time to assess each application;^{1,3}
- Assess the application as a whole rather than relying on any one specific element (e.g., letters of recommendation that may contain biases);¹
- Be able to provide logical and justifiable explanations for declining or selecting a person;³
- Be sure to collect only factual information that relates to the selection criteria and sub-criteria in order to avoid misinterpretations or false assumptions based on applicants' personal characteristics.¹



RESOURCES

Unconscious bias and recruitment pamphlet [French only].

https://rqedi.com/wp-content/uploads/2020/03/Feuillet-BiaisInconscientsetRecrut_FinaleWEB.pdf

EDI in research pamphlet: Designing and advertising postings.

<http://cfsg.espaceweb.usherbrooke.ca/resources-for-implementing-edi-in-research/>

Unconscious bias training module.

<https://www.chairs-chaires.gc.ca/program-programme/equity-equite/bias/module-eng.aspx>

Training on bias.

<https://rqedi.com/en/workshops/>

Implicit Association Test.

<https://implicit.harvard.edu/implicit/canada/takeatest.html>

REFERENCES

- ¹ Canada Research Chairs (2019). *Bias in peer review – training module*. Government of Canada. <https://www.chairs-chaires.gc.ca/program-programme/equity-equite/bias/module-eng.pdf>
- ² Bohnet, I. (2016). *What Works: Gender Equality By Design*, Harvard University Press.
- ³ Fine, E. & Handelsman, J. (2012). *Reviewing applicants: Research on bias and assumptions*. WISELI. https://wiseli.wisc.edu/wp-content/uploads/sites/662/2018/10/BiasBrochure_3rdEd.pdf
- ⁴ Girier, D., Lamouri, J., & Pulido, B. (2020). *Biais inconscients et recrutement*. https://rqedi.com/wp-content/uploads/2020/03/Feuillet-BiaisInconscientsetRecrut_FinaleWEB.pdf
- ⁵ Parker, R., Pelletier, J., & Croft, E. (2015). *WWEST's Gender Diversity in STEM: A briefing on women in science and engineering*. Vancouver, UBC Press. <https://open.library.ubc.ca/soa/cIRcle/collections/facultyresearchandpublications/52383/items/1.0384523>
- ⁶ Charbonneau, M. & Ouellette, D. (2008). *L'accès à l'égalité en emploi*. Commission des droits de la personne et des droits de la jeunesse.
- ⁷ Pride at Work Canada (2018). *Hiring across all spectrums: A report on broadening opportunities for LGBTQ2+ Jobseekers*. http://prideatwork.ca/wp-content/uploads/2018/01/PrideAtWork_2018_Round_FINAL-s.pdf
- ⁸ Koval, C. Z., & Rosette, A. S. (2021). The Natural Hair Bias in Job Recruitment. *Social Psychological and Personality Science*, 12(5), 741–750. <https://doi.org/10.1177/1948550620937937>
- ⁹ Fine, E. & Handelsman, J. (2010). *Benefits and challenges of diversity in academic settings*. WISELI. https://wiseli.wisc.edu/wp-content/uploads/sites/662/2018/11/Benefits_Challenges.pdf
- ¹⁰ Eid, P. (2012). Les inégalités « ethnoraciales » dans l'accès à l'emploi à Montréal : le poids de la discrimination. *Recherches sociographiques*, 53(2), 415-450. <https://doi.org/10.7202/1012407ar>
- ¹¹ 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. <https://journals.sagepub.com/doi/pdf/10.1177/0957926503014002277>
- ¹² Public Service Commission of Canada (2009). *Structured Interviewing: How to design and conduct structured interviews for an appointment process*. <https://www.canada.ca/content/dam/canada/public-service-commission/migration/plcy-pltq/guides/structured-structuree/rpt-eng.pdf>
- ¹³ Canada Research Chairs (2018). *Creating an Equitable, Diverse and Inclusive Research Environment: A Best Practices Guide for Recruitment, Hiring and Retention*. Government of Canada. https://www.chairs-chaires.gc.ca/program-programme/equity-equite/best_practices-pratiques_exemplaires-eng.aspx
- ¹⁴ Ernst & Young. (2013). *Outsmarting our brains: Overcoming hidden biases to harness diversity's true potential*. https://www.rbc.com/diversity-inclusion/_assets-custom/includes/pdf/Outsmarting_our_brains_Overcoming_hidden_biases.pdf
- ¹⁵ Québec Interuniversity Equity, Diversity, Inclusion Network (2020). *Workshops: Unconscious biases and recruitment*. <https://rqedi.com/en/workshops/>



ABOUT THE NSERC CHAIR FOR WOMEN IN SCIENCE AND ENGINEERING IN QUEBEC

The mission of the Chair for Women in Science and Engineering (CWSE) in Quebec is to increase the representation of women and maintain their participation in the field of science and engineering (SE). The Chair's first action area is to work with girls and the people close to them to present and demystify the opportunities that SE has to offer. The Chair also works with students and professionals to better equip them to overcome the obstacles that continue to affect their careers. Moreover, the Chair works with several communities to rally efforts around equity, diversity and inclusion in higher education and research. The Chair's second action area is to conduct research to understand and raise awareness of this issue. In this way, it helps propose potential solutions to the various authorities involved, with a view to driving change.



ABOUT UNIVERSITÉ DE SHERBROOKE

In its 2018–2022 strategic plan, Université de Sherbrooke committed to becoming an exemplary environment with respect to equity, diversity and inclusion (EDI). This commitment has resulted in the adoption of a related action plan, which is under the direct responsibility of the rector. Implementation of this plan is supported by the Executive Committee, the EDI Strategic Committee and all its working committees, and by several influential members of our community. The university is proud to be able to count on the leadership of the Chair for Women in Science and Engineering, which is contributing to this objective by developing a series of EDI-related training and tools, thereby strengthening our academic community.

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