

# MINIMIZING UNCONSCIOUS BIAS IN PEER REVIEW

## What is Unconscious Bias?

Unconscious bias is an implicit attitude, action, assumption, or judgement that is controlled by automatic evaluations. Such biases are part of the human condition: they are natural, largely unavoidable, and occur without a person's awareness or control. Everyone has unconscious biases, including people trained for objectivity, such as scientists.

## Why do we have Unconscious Biases?

Biases may be automatically formed based upon:

- An evolutionary response to protect us from potential threats
- How (dis)similar another person is from us
- Our upbringing and the social structure and culture we've been part of
- Our own experiences and events that have impacted our lives and careers
- Things told by other people or things observed in the (social) media

We use mental shortcuts and make automatic assumptions to classify situations, things, or people. This categorization can be useful at times, for example it helps us to make quick decisions when under threat. However, other incorrect biases may negatively affect our personal and professional lives and may unjustly affect the lives of others.

## Why it is important to recognize and counteract unconscious bias

Unconscious bias can have wide-ranging effects, including shaping hiring decisions and the perception of competence. It may also contribute to a lack of diversity. [NIH fosters a culture of inclusion and diversity](#) in the national scientific workforce. Positive effects of diversity in the scientific research enterprise are:

- Enhancement of excellence, creativity, and innovation
- Better problem-solving
- A broader scope of biomedical inquiries
- Reduction of health disparities
- More fairness in our highly diverse nation.

## Unconscious Bias in Peer Review

NIH Peer Review strives to ensure that each application or proposal receives an objective, fair, equitable, timely review that is free of bias. For the highly competitive process of obtaining research funding, unconscious biases during peer review could influence thoughts, judgements, interpretations, and evaluations resulting in a score not necessarily reflective of an application's true quality.

Some unconscious biases affecting peer review could be:

- Different performance standards for different groups

- Confirmation bias (e.g. knowing of the excellent work a PI has done in the past and assuming that the application under review is equally exceptional, resulting in less critical evaluation)
- Racial/ethnic bias
- Gender bias
- Age bias
- Institutional bias
- Cultural preconceptions
- Geographic preconceptions
- Language presumptions
- Scientific area (e.g. having more enthusiasm for applications addressing someone's own area of research)

## How to recognize and minimize the influence of Unconscious Bias in Peer Review (and beyond)

### 1. Take the Implicit Association Test.

The [Implicit Association Test](#) can help you identify your own unconscious bias. The test assesses if mental links exist between concepts and potentially associated values.

- ### 2. Be self-aware:
- frequently re-evaluate your judgments for influence of unconscious bias. In peer review meeting, ask yourself:
- Am I evaluating the application solely on what is presented, or did I unconsciously make assumptions based on the reputation of the institute/PI?
  - Did I use similar vocabulary for majority and minority/underrepresented applicants?
  - Have I unconsciously assumed different research success probabilities based on the gender and potential family responsibilities of the applicant?
- ### 3. Inform yourself
- about unconscious biases to help you recognize it in you and others.
- ### 4. Change potential preexisting internal images:
- think of non-stereotypical leaders and pioneers that you admire.
- ### 5. Be part of the solution:
- As a leader, cause ripple effects by being a role model: use inclusive language, increase diversity to include underrepresented groups on your own team, and make efforts to empower everyone equally.
  - Raise awareness: encourage your leadership to offer training and workshops on unconscious bias. Use your voice as a leader (e.g. in seminars, at conferences, on social media) to support underrepresented groups in your profession.
  - Speak up whenever you observe unconscious bias.

## Additional Resources:

- [Science of Diversity](#)
- [NIH Office of Scientific Workforce Diversity - Implicit Bias](#)
- [Canadian Research Chairs Program – Bias in Peer Review](#)