

## Unconscious Bias in Peer Reviews

### Faculty of Science 2012

In the process of evaluating applications and reference letters, extensive research has shown that Unconscious Bias can influence the evaluation of CVs from women and visible minorities. Unconscious Bias or Implicit Bias is social behavior driven by learned stereotypes that operate automatically, and therefore unconsciously, when we interact with other people [1]. Research finds that people can consciously believe in equality while simultaneously acting on subconscious prejudices they are not aware of. Recent studies show how robust stereotypes continue to exist and that stereotypes affect a person's evaluation of job applicants, achievements and potential – even when the actual performances are identical. The following are some points (adapted from Ref. 2, 3) to keep in mind when evaluating CVs and letters of evaluation.

#### **Documented studies of Unconscious Bias:**

##### Letters of recommendation for women differ systematically from those for men.

- Trix and Psenka [4] examined over 300 letters of recommendation for medical faculty at a large U.S. medical school. Their analysis showed that, compared with letters for men, the letters for women were more likely to:
  - *be shorter*, yet contain more references to aspects of personal life;
  - *provide minimal assurance*, with comments on generalities but without specifics (15% of letters for females vs 6% for males);
  - *be doubt raisers*, by including hedges, potentially negative comments, unexplained comments, faint praise, or irrelevancies (24% vs 12%);
  - *use stereotypic attributes*, such as “compassionate” or “relates well” rather than “successful” or nouns such as “accomplishment” or “achievement”;
  - *use grindstone adjectives*, such as “hardworking” or “conscientious” (34% vs 23%);
  - letters for women had *less repetition of standout adjectives*, such as “outstanding” and *less repetition* of the word “research” (62% vs 35%).

##### Evaluations of CVs can be influenced by unconscious bias.

- Academics in Psychology in the U.S. were asked to evaluate a CV of a job applicant, with the CVs being identical except that each was randomly assigned either a male or female name. Both men and women who evaluated the CV were significantly more likely to recommend hiring the “male” applicant than the “female” applicant [5].
- Undergraduates were asked to evaluate fictitious CVs of male and female managers who were successful in male-dominated jobs. Female managers were rated as less likeable, more hostile and less competent than males [6].
- Participants were asked to evaluate fictitious resumes from “candidates” who were Asian-American, Mexican-American, African-American and Caucasian men. African-American candidates were rated the least positively and Asian-American the most positively [7].

##### Perceptions of productivity or talent can be influenced by gender.

- Wennerås and Wold [8] examined the peer-review scores of applicants for postdoctoral fellowships from the Swedish Medical Research Council. They correlated reviewers’ “competence” scores of perceived scientific productivity with several measures of scientific impact. They found that reviewers assigned lower competence scores to women than to men with the same measure of scientific impact. The difference was equivalent to approximately three more articles in *Nature* or *Science*, or 20 more articles in a specialist journal.

- A comparison of audition procedures for symphony orchestras between "blind" or screened auditions compared to "not-blind" found that blind auditions resulted in a 25 to 30% increase in hiring of women musicians [9].

Unconscious bias negatively affects visible minorities in the selection process.

- Resumes were given either traditionally African-American or white names and submitted to help-wanted ads on job search web sites. Resumes with white names were 50% more likely to receive a callback than those with African-American names [10].
- A similar study carried out in the United Kingdom found that there was a 29% greater callback for interviews for candidates with white names over equivalent applications from those with names associated with visible minorities [11]. The level of discrimination was found to be high across all ethnic groups.

**Steps to be taken to overcome unconscious bias:**

- Recruit a diverse hiring/recruiting committee
- Train committees about unconscious bias and to reflect on unconscious bias during the hiring process. An interesting exercise is to use the Implicit Association Test - <https://implicit.harvard.edu/>
- Before evaluating applications create an objective, structured process by setting criteria or using objective measures to assess each candidate
- Consistently apply all criteria to each candidate and do not depend too heavily on one element of the application or CV
- Spend sufficient time on each application (the influence of unconscious bias increases when reviewers are pressed for time)
- Define the decisions you make for rejecting or accepting an application (be ready to defend your decisions based on objective criteria)

**References**

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