Research on Bias and Assumptions

Assumptions Shape the Review Process

We all like to think that we are objective scholars who judge people based entirely on their experience and achievements, but copious research shows that every one of us brings a lifetime of experience and cultural history that shapes the review process.

The results from controlled studies in which people were asked to make judgments about subjects demonstrate the potentially prejudicial nature of the many implicit or unconscious assumptions we can make. Examples range from physical and social expectations or assumptions to those that have a clear connection to hiring, even for faculty positions.

> *. . . as we become aware of our hypotheses, we replace our belief in a just world with a view of the world in which bias plays a role. Since this is a state of affairs we wish were otherwise, we prefer not to acknowledge it. But we can learn.*
>
> **Virginia Valian**

It is important to note that in most of these studies, the gender of the evaluator was not significant, indicating that both men and women share and apply the same assumptions about gender.

Recognizing biases and other influences not related to the quality of candidates can help reduce their impact on your search and review of candidates. Spending sufficient time on evaluation (15-20 minutes per application) can also reduce the influence of assumptions.

Individuals May Not Fit the Generalization

- When shown photographs of people of the same height, evaluators overestimated the heights of male subjects and underestimated the heights of female subjects, even though a reference point, such as a doorway, was provided (Biernat et al.).
- When shown photographs of men with similar athletic abilities, evaluators rated the athletic ability of African American men higher than that of white men (Biernat et al.).

These studies show how generalizations that may or may not be valid can be applied to the evaluation of individuals (Bielby and Baron). In the study on height, evaluators applied the statistically accurate generalization that men are usually taller than women to their estimates of the height of individuals who did not necessarily conform to the generalization. If we can inaccurately apply generalizations to characteristics as objective and easily measured as height, what happens when the qualities we are evaluating are not as objective or as easily measured? What happens when the generalizations are not accurate?

> *"To evaluate other people more accurately we need to challenge our implicit hypotheses . . .we need to become explicitly aware of them . . .*
>
> **Virginia Valian**

Evaluation Bias

- When rating the quality of verbal skills as indicated by vocabulary definitions, evaluators rated the skills lower if they were told an African American provided the definitions than if they were told that a white person provided them (Biernat et al.).

- When asked to assess the contribution of skill and luck to successful performance of a task, evaluators more frequently attributed success to skill for males and to luck for females, even though males and females succeeded equally. (Deaux and Emswiller).

- Evidence shows that perceived incongruities between the female gender role and leadership roles cause two types of disadvantage for women: (1) ideas about the female gender role cause women to be perceived as having less leadership ability than men and consequently diminish women's rise to leadership positions, and (2) women in leadership positions receive less favorable evaluations because they are perceived to be violating gender norms. These perceived incongruities lead to attitudes that are less positive toward female than male leaders (Eagly and Karau; Ridgeway).

- Evaluators who were busy, distracted by other tasks, and under time pressure gave women lower ratings than men for the same written evaluation of job performance. Sex bias decreased when they were able to give all their time and attention to their judgments, which rarely occurs in actual work settings. **This study indicates that evaluators are more likely to rely upon underlying assumptions and biases when they cannot/do not give sufficient time and attention to their evaluations (Martell).**

Biases in Academic Contexts

- A study of postdoctoral fellowships awarded by the Medical Research Council in Sweden, found that women candidates needed substantially more publications (the equivalent of 3 more papers in *Nature* or *Science*, or 20 more papers in specialty journals such as *Infection and Immunity* or *Neuroscience*) to achieve the same rating as men, unless they personally knew someone on the panel (Wenneras and Wold).

- A study of over 300 recommendation letters for medical faculty at a large American medical school in the 1990s found that letters for female applicants differed systematically from those for males. Letters written for women were shorter, provided "minimal assurance" rather than solid recommendation, raised more doubts, and portrayed women as students and teachers while portraying men as researchers and professionals. All letters studied were written for successful candidates only. (Trix and Psenka).

- In a national study, 238 academic psychologists (118 male, 120 female) evaluated a résumé randomly assigned a male or a female name. Both male and female participants gave the male applicant better evaluations for teaching, research, and service experience and both were more likely to hire the male than the female applicant. (Steinpreis, et.al.) Another study showed that the preference for males was greater when women represented a small proportion of the pool of candidates, as is typical in many academic fields (Heilman).

Assumptions and Biases in the Search Process

Biases and assumptions can influence your search in the following ways:

- Women and minority candidates may be subject to different expectations in areas such as numbers of publications, name recognition, or personal acquaintance with a committee member. (Recall the example of the Swedish Medical Research Council.)

- Candidates from institutions other than the major research universities that have trained most of our faculty may be under-valued.

- The work, ideas, and findings of women or minorities may be undervalued or unfairly attributed to a research director or collaborators despite contrary evidence in publications or letters of reference. (Recall the biases seen in evaluations of written descriptions of job performance, and the attribution of success to luck rather than skill.)

> *When assumptions "that cultural, racial, ethnic, and gender biases are simply nonexistent [in] screening and evaluation processes, there is grave danger that minority and female candidates will be rejected."*
>
> **Caroline S.V. Turner**

- The ability of females or minorities to run a research group, raise funds, and supervise students and staff of different gender or ethnicity may be underestimated. (Recall social assumptions about leadership abilities.)

- Assumptions about possible family responsibilities and their effect on the candidate's career path may negatively influence evaluation of a candidate's merit, despite evidence of productivity. (Recall studies of the influence of generalizations on evaluation.)

- Negative assumptions about whether female or minority candidates will "fit in" to the existing environment can influence evaluation.

Practices to Enable Equity—Reviewing Applicants

- Learn about research on biases and assumptions. Consciously strive to minimize their influence on your evaluation of candidates.

- Develop criteria for evaluating candidates and apply them consistently to all applicants.

- Spend sufficient time (15-20 minutes) evaluating each applicant.

- Evaluate each candidate's entire application; don't depend too heavily on only one element such as the letters of recommendation, or the prestige of the degree-granting institution or post-doctoral program.

- Be able to defend every decision for rejecting or retaining a candidate.

- Periodically evaluate your decisions and consider whether qualified women and underrepresented minorities are included. If not, consider whether evaluation biases and assumptions are influencing your decisions.

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Diversity of experience, age, physical ability, religion, ethnicity, race, and gender contributes to the richness of the environment for teaching and research.

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