

# Unconscious Bias

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*The eye sees only what the mind  
is prepared to comprehend.*

—Robertson Davies

One of the best-known studies of unconscious bias involved the hiring of symphony musicians. In 1970, fewer than 5% of all such musicians were female. In an attempt to overcome what seemed to be a bias against women, many symphonies began conducting “blind” auditions.

Decisions about which musician to hire were no longer based on auditions in which the performer could be seen. Instead, candidates were placed behind a screen, so that judges could not tell whether each musician was male or female.

Use of the screen was found to increase the probability that a female candidate would advance beyond the preliminary rounds of the selection process by 50%, and within two decades approximately 25% of all such musicians were female [1].

Bias is a tendency to prefer otherwise equivalent members of one class or group over another. The word comes from a Greek root meaning “slanted” or “tilted.” Often biases are accompanied by an inability or unwillingness to look at matters from an alternate point of view.

Unconscious bias refers to the operation of preferences outside the awareness of a subject. For example, a prospective employer may

unknowingly exhibit a preference toward male candidates over female, whites over blacks, or rich people over the poor.

It is important to note that at least some biases seem to be part of human nature. For example, newborn human infants tend to prefer the sound of female voices over the voices of males, and to prefer their mother’s voice to the voices of other women [2].

Other types of bias are undoubtedly acquired. For example, one study has suggested that when two employment candidates have exactly the same credentials, the one with a “black”-sounding name is 50% less likely than a candidate with a “white”-sounding one to get an interview [3]. Of course, biases also operate within these categories. Among women, blondes seem to enjoy a 7% pay advantage over brunettes and redheads [4], and for each 1% increase in a woman’s body mass index, her family income decreases 0.6% [5]. No such relationships exist for men.

Another variable on which biases seem to be at work is height. On average, each 1-inch increase in height for men and women is associated with a \$789 increase in annual income, and US presidents and CEOs are on average taller than age-matched controls [6].

Demographic disparities in radiology may indicate the operation of

biases. For example, among the 20 largest US medical specialties, radiology ranks 17th in the percentage of its members who are female, and in the percentage of practitioners from under-represented minorities, it ranks 20th [7].

Of course, such statistical associations do not prove that bias is at work, but they are suggestive. They also raise questions about whether radiology is doing everything it can to encourage members of such groups to join the field.

## TYPES OF BIAS

Unconscious bias comes in many forms. One of the most common is affinity bias, the tendency for subjects to find those who are like them preferable to those who are different. Such similarities can be biological, but they may also involve factors such as clothing and hairstyle.

A related type of bias is halo bias. The fact that a subject likes a person can lead to superior assessments on other traits that have not been assessed. For example, an evaluator may unwittingly give higher ratings to a candidate who supports the same sports franchise.

Another type is confirmation bias. Subjects who evaluate a candidate tend to observe what they expect to observe. For example, an evaluator who thinks that men are smarter than women will tend to find male candidates more intelligent.

Perception bias can have the same result. For example, an evaluator might tend to discount the performance of a candidate who took more time to complete an examination, despite the fact that the slower candidate scored as well as another who completed the examination more quickly.

Another type of bias afflicts candidates themselves. In conformity bias, people try to mimic the traits of a group they are trying to fit into. For example, candidates may speak derisively of certain types of people simply because they have heard group members do so.

Of course, the effects of bias are not always pernicious. For example, radiology learners may develop salutary habits of interacting with patients and colleagues because they have seen and heard radiologists they admire exhibit similar conduct.

It is important to recognize that groups of people regarded as disadvantaged can be no less subject to unconscious biases than so-called privileged classes. For example, women and blacks may be favorably biased toward other female and black candidates.

## COMPENSATING FOR BIAS

When biases are truly unconscious, the ability to reason past them may be limited. However, there are means of compensating for them. One approach is to recognize that such biases exist and adopt strategies that help to counterbalance them.

For example, here are some questions evaluators can pose when they find themselves in situations in which biases may be exerting unwanted influence:

- Do I find myself feeling especially attracted toward, uncomfortable

with, or even repelled by a particular candidate?

- Does this candidate remind me of someone or some group of people with whom I have had experience in the past, and is this similarity affecting my evaluation?
- Am I inclined to help, shun, protect, humiliate, ally myself with, or punish this particular candidate, and if so, why?
- Am I sufficiently qualified and experienced to render a well-considered opinion on this candidate, or are biases leading me to pretend to know more than I do?
- Would someone who looks different from me offer a similar assessment, or do I have reason to suspect that unconscious biases are getting the better of me?

Beyond the individual level, organizations can also take helpful steps. For example, faculty members of a department with a dearth of underrepresented minorities might make special efforts to reach out to and encourage candidates from such groups.

A specific technique that can help to counteract unconscious bias is called “priming.” Before an employment interview takes place, interview teams can ask themselves the simple question, “Does this candidate’s dossier seem in any way especially similar to or different from our own?”

Another approach is explicitly discussing potential sources of bias during postinterview deliberations, with the hope that doing so will help team members recognize the role bias may be playing in shaping their overall assessments.

Another way of mitigating unconscious bias is to use standardized questions for at least portions of each interview, helping to counteract the tendency for the discussion to focus

on points of similarity or dissimilarity between interviewers and candidates.

Another approach is to strive to ensure that interview teams are composed of individuals who exhibit a high degree of diversity. By balancing such traits as gender, race, and ethnicity, the operation of many biases can be rendered more transparent and better compensated for.

## CONCLUSION

Issues such as unconscious bias highlight the fact that even highly science and technology-intensive fields such as radiology are still human endeavors and therefore are subject to the same human limitations and liabilities that operate in other spheres of human life.

To some degree, the human tendency toward biases of various types can be mitigated by organizational techniques that help to shine a light on bias, neutralize it, and, where necessary, even directly counterbalance it.

But equally important is a focus on human character. The people whose powers of appraising others we most admire are not individuals whose decision making is rife with bias, but people who are able to see past their biases and discern what really matters.

Those whose judgments are dominated by bias will keep making mistakes, failing to recognize how worthy others truly are and giving others a free pass despite the fact that a more sober analysis would advise caution.

Although unconscious bias is not always deleterious, it is important to recognize that it can take a serious toll in radiology by preventing the development of fulfilling interpersonal relationships

and depriving organizations of colleagues with the potential to make a real difference.

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