

## Book Review

### **Blinding as a Solution to Bias: Strengthening Biomedical Science, Forensic Science, and Law.**

Robertson, C. T., & Kesselheim, A. S. (2016). *Blinding as a solution to bias: Strengthening biomedical science, forensic science, and law*. Amsterdam; Boston: Academic Press. ISBN-13: 978-0128024607

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Forensic experts recognize that bias leads to inaccurate decisions. The goal of eliminating bias may be overly ambitious; instead, minimizing bias may be more realistic. This multi-author compilation by Robertson and Kesselheim promotes the use of “blinding” as a means to accomplish this goal.

*Blinding as a Solution to Bias: Strengthening Biomedical Science, Forensic Science, and Law*, provides a very broad overview of various blinding strategies in diverse areas. The editors suggest that blinding is a potential solution to bias in highly disparate areas of decision-making, including the forensic sciences, medicine, and jury deliberations. Notwithstanding an excellent "Introduction," the text does not include a definition of the term "blinding." The descriptive consensus that emerges from the book, however, is that blinding is an active endeavor, which withholds information from the decision-maker that is potentially biasing, irrelevant, or extraneous to the decision itself.

The opening chapter by MacLean and Dror (a “primer” on cognitive bias) provides a concise overview of research on the cognitive psychology of bias in forensic decision-making. Dror's own research has focused on bias in forensic decision-making involving “matching” decisions such as fingerprints, DNA admixture analysis, and forensic anthropology. This chapter succinctly reviews research in this area, and discusses the latest blinding techniques such as “linear sequential unmasking” (LSU). LSU has significant potential to reduce bias in forensic "matching" decisions, particularly when the pertinent confounding elements are well known.

As the book progresses, other authors and topics expand this narrow focus of "blinding" to a wider landscape. Their views broaden from the typical cognitive biases we associate with errors in fingerprint matching or eyewitness identification, to institutional corruption or tax policies. Discussions range from withholding information about the suspect from the fingerprint technician to strategies to improve campaign financing.

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A typical physician, even one not frequently involved in forensics, will likely find the section on blinding and biomedical science of interest. For example, the chapter on "Blinding, Medicine, and Honest Adjudication" by Podolsky provides a useful review of the history of the "personal equation" as a potential confounding factor, something recognized in clinical medicine nearly two centuries ago. This chapter is followed by Hróbjartsson's chapter on blinding and medical research, with a discussion and review of blinding in medical and surgical efficacy studies. There is even a chapter that discusses the importance of blind peer review in academic journals with some discussion on how to improve the process.

An important chapter is written by Thompson, which discusses how to determine the proper evidentiary basis for an expert's opinion. It provides an initial attempt to utilize Bayesian methods of assigning values or weight to pieces of evidence, and examines how to combine them for a probabilistic determination. Thompson echoes some of the very recent attempts by the NIST/CSAFE initiatives, ("Center for Statistics and Applications in Forensic Evidence," 2015; <http://forensic.stat.iastate.edu>) aimed at improving our understanding of the basic building blocks of forensic science.

Of particular relevance to experts involved in civil litigation and medical malpractice is radiologist Robinson's chapter on several pragmatic techniques to reduce the "hindsight" bias common in malpractice case decisions. One approach, termed the "second read" method, presents the radiologist with information from a case at litigation within the context of a number of similar cases. Thus, although the radiologist knows one of the cases is part of a lawsuit, they cannot be certain which it is.

The book's final section by Feldman and Lifshitz discusses blinding within legal institutions. The authors review larger questions including theories of anonymity, campaign financing, arbitration and judicial disqualification. The forensic psychologist or psychiatrist may find the chapter on blinding in eyewitness identification of interest, although somewhat basic. Those seeking a more detailed discussion on this topic may turn to Cutler and Kovera's (2010) book.

Overall, this book is to be lauded for its attempt to apply "blinding" as an over-arching method to reduce bias and assist us in making better decisions; however, it runs the risk of diminishing the usefulness of the term. For example, are the tasks of blinding a fingerprint analyst from the identity of the suspect who left the print really comparable to transparency in IRS policies?

Although touched upon by Koppl and Krane in their chapter, several issues are often not clearly addressed in the book, including: (1) if blinding requires withholding information from an expert, who will be the arbiter of such a decision? Such withholding implies a third-party, be it a lab, institution or governmental authority, that sets up a system to make such a decision, and (2) blinding has yet to pass the acid-test of empirical research before it can be accepted as a trusted tool to assist typical forensic decision-making tasks the readers of this journal will likely encounter.

Additionally, in promulgating a potential panacea for bias, the book may potentially encounter the same obstacles as prior solutions. Several decades of attempts to study, categorize, and describe biases have proven to be less fruitful than initially hoped. Indeed, the most recent approaches, instead of moving toward the general, attempt to be much more specific. The recent NIST/CSAFE approaches and funding seek to evaluate the specific probative value of individual pieces of evidence (e.g. fingerprint ridges or shoe wear patterns).

In summary, an eclectic forensic expert will find several worthy discussions within this multi-authored smorgasbord by Robertson and Besselian. For the reader who is primarily interested in understanding bias in decision-making in forensic psychology, he or she can explore other works by researchers such as Murrie et al. (e.g., Boccaccini, Turner, Murrie, & Rufino, 2012; Murrie, Boccaccini, Guarnera, & Rufino, 2013), Dror (Dror et al., 2011; Dror & Charlton, 2006; Kassin, Dror, & Kukucka, 2013) or Neal (T. Neal & Brodsky, 2016; T. M. S. Neal & Grisso, 2014). Those interested in clinical decision-making will find especially useful works by Croskerry (Croskerry, 2014), Gigerenzer (Gigerenzer & Edwards, 2003), or Arkes (Arkes, 2013).

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