



Book Review

Review of *Predictive Policing and Artificial Intelligence*

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Book: *Predictive Policing and Artificial Intelligence*, ed. John McDaniel and Ken Pease, 1st ed. (New York: Routledge, 2021), 330 pages, ISBN-10 0367210983 (hardcover), ISBN-13 9780367210984 (hardcover), <https://www.routledge.com/Predictive-Policing-and-Artificial-Intelligence/McDaniel-Pease/p/book/9780367701369>.

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Predictive Policing and Artificial Intelligence, edited by John McDaniel and Ken Pease, is an engaging book that seeks to address some of the challenges in the deployment of predictive algorithms and machine learning solutions as tools for law enforcement agencies. The book's primary argument is that predictive policing technologies are rapidly proliferating throughout domestic law enforcement, even though these technologies are not well tested and should be regarded with caution and skepticism. The book is divided into two parts. The first part focuses on big data, predictive technology tools, and the challenges of mitigating bias. The second part emphasizes the complexity of police accountability and the preservation of civil and human rights.

McDaniel, a social scientist and legal scholar, and Pease, a professor of policing, are established authorities in the criminal justice field, and they assembled an impressive collection of contributing authors with impeccable academic and professional experience to write ten of the book's chapters, covering topics in data science, criminal justice, privacy, human rights, emerging technologies, law, ethics, intelligence, psychology, and corrections.

The authors introduce the theories and evolution of predictive policing and the associated technological tools that are applied to the contemporary policing mission. As previously mentioned, the book is divided into two parts:



Part I, *Bias and Big Data*, includes chapters by Janet Chan on the future of AI in policing; predictive policing by Melisa Hamilton; policing, artificial intelligence and choice architecture by the editors; a chapter on the lessons from big data in health care by I. Glenn Cohen and Harry Graver; an examination of artificial intelligence and online extremism by Miriam Fernandez and Harith Alani; and finally, a look at predictive policing and criminal law by Harith Alani.

Part II, *Police Accountability and Human Rights*, includes chapters on accountability in predictive policing by Aaron Shapiro; governance and oversight of machine learning predictive algorithms and future crimes by Alexander Babuta and Marion Oswald; algorithmic impropriety in UK policing by Jamie Grace; big data governance in policing by Michael Rowe and Rick Muir; and decision-making technology for officer learning by Pamela Richards, Debbie Roberts, and Mark Britton. These two parts are followed by the editors' conclusion.

There is an exhaustive analysis of the perceived advantages as well as the significant risks inherent to the technology, as outlined in the following review. The systems discussed in the text use big data, pattern recognition algorithms, and machine learning tools to manage an extensive list of parameters to more efficiently solve past crimes, forecast the approximate times and locations of future crimes based on historical crime data, predict who is likely to be victimized, and suggest who is likely to repeat criminal behavior. These applications purport to increase efficiency, decrease cost, reduce human bias, and supplant the need for more police personnel. The authors are appropriately skeptical of these claims.

Proponents of predictive policing highlight the advantages of algorithms rapidly searching through thousands of records and filtering them down to a manageable number for police personnel to examine. There are artificial intelligence (AI) tools that can find links among related data items and establish patterns of activity. The hotspot applications analyze crime patterns and highlight geographic areas of high crime, including specific days of the week or times during the day. This offers potential advantages for police agencies to deploy personnel in the right places and at the right times to prevent crime or potentially apprehend criminals in the act.

The concept of doing more and better enforcement with fewer police officers is compelling for police administrators with shrinking budgets. There is a similar argument for AI solutions that provide risk scores for suspects that can be used to predict future offenders. Police agencies can optimize criminal intelligence activities by focusing on fewer potential offenders. For many law enforcement administrators, this is an appealing feature since crime statistics suggest that most crime is committed by a small percentage of criminals. AI algorithms allegedly perform all these tasks, while potentially reducing errors caused by natural human discretion and bias.

Despite the proposed advantages, AI is fraught with controversy, risk, and uncertainty. The authors naturally question police accountability should procedural decisions become the domain of machine learning systems. An overreliance on the technology might be tempting to save time and resources, but the results of such an approach would likely have unintended consequences.

AI systems rely heavily upon the collection of big data, which includes vast amounts of personal data. There are substantial and relevant concerns about privacy and the security of this data. Another significant concern relates to the embedding of bias into these systems. The authors pointed to research where specific ethnic and socioeconomic groups were overrepresented in the

AI outputs. The technology's accuracy and potential bias reflect the information inputs. To reduce human bias, these tools may in fact achieve the opposite. Many of these systems have not been sufficiently tested, and practitioners may not fully understand the technology well enough to assess its accuracy or effectiveness.

Many human rights activists and the media raise legitimate questions about the efficacy of predictive policing and the associated AI tools that are employed. Without a more transparent conversation about the technology and much more in-depth testing, policing agencies risk losing not only the use of AI but also the public's trust. The human rights implications associated with the indiscriminate use of AI in policing tactics are far too perilous to ignore.

The book concludes its AI and predictive policing debate by cautioning against the rapid deployment of and overreliance on these technologies. The speed of technological innovation surrounding AI and machine learning has outpaced both public policy and the adoption of reasonable controls. There is no comprehensive roadmap for the development, testing, or deployment of these systems, and public oversight of this technology is nearly nonexistent.

The strength of *Predictive Policing and Artificial Intelligence* is its thorough and thoughtful examination of the advantages and disadvantages of AI systems and predictive policing. A diverse group of authors present the topic from various and insightful points of view. The book's one shortcoming is the occasional use of erudite and dense academic language, which may create a challenge for the typical practitioner.

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* Corrections included addressing typographical errors and formatting issues.