Chapter 9
Justice in the Age of Algorithms:
Ensuring Transparency, Accountability, and Fairness in AI-Driven Legal Systems

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ABSTRACT

The use of artificial intelligence poses challenges for legal systems such as algorithmic bias, lack of interpretability, and data privacy issues embedded in ethical dilemmas to reinforce existing power asymmetries. Algorithmic bias can reinforce the existing inequities of our social world, undermining fairness and hurting some communities more than others. AI models, with their "black box" nature, create questions of transparency and accountability, and data privacy is an evergreen concern about the use of sensitive personal information. On top of that, AI systems can reinforce existing power structures that serve the privileged populations. Solutions could be

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new fairness-aware algorithms, privatization techniques such as differential privacy and regulatory actions mandating transparency and accountability. Ethical AI in society, interdisciplinary collaboration, and participatory governance are ethical and socio-democratic imperatives to achieve responsible deployment of trustworthy AI.

1. INTRODUCTION

Artificial intelligence (AI) is the engine for change in the digital age, transforming nearly every sector of society, from healthcare to education to finance and now increasingly, law. With the capability to sift through enormous datasets in seconds, predict case results, and provide near-perfect recommendations for the optimal path forward, AI has the potential to be a game-changing tool in the administration of justice (Goodman & Flaxman, 2017). Yet the use of AI in legal systems presents its own challenges and dangers, invoking awkward questions about fairness, transparency and accountability. With AI more widely adopted by legal institutions, it is crucial to make sure that these systems operate in ways that preserve the fundamental tenets of justice.

The promise of AI in law relates to doing tasks humans traditionally do, but in a more efficient manner particularly repetitive and labor-intensive tasks e.g. legal research and document review. As per Ashley (2017), Natural Language Processing-powered tools can review thousands of legal documents in a fraction of the time compared to the time it would take a human lawyer in finding relevant case law and precedent. Moreover, some AI systems also assist in judicial outcome prediction by analyzing data of past cases and providing suggestions to lawyers and judges. It could improve decision-making, help in resource allocation and ultimately reduce the backlog of courts. However, as much as data-driven insights hold potential to inform us about legal realities and norms, they also represent a risk of climatological simplification or distortion when decoupled from the messy legalisms of practice (Barocas & Selbst, 2016).

One of the most controversial applications of AI is its use in criminal justice. However, within criminal justice, AI is used for predictive policing, risk-assessment for bail and sentencing as well as predicting recidivism (Brayne, 2020). In some jurisdictions, for example, the COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) algorithm has been utilized to estimate a defendant's likelihood of re-offense. However, investigative reporting by ProPublica showed enormous racial disparities in the predictions of COMPAS. According to Angwin, Larson, Mattu, & Kirchner (2016), algorithms suffered from racial biases. ‘Black’ defendants were identified as a higher risk than their white equivalent for recidivism even when they had not reoffended. These findings brought into question the ethics