Courts and Predictive Algorithms

One of the most striking innovations in the criminal justice system during the past thirty years has been the introduction of actuarial methods – statistical models and software programs –designed to help judges and prosecutors assess the risk of criminal offenders. Predictive algorithms are currently used in four major areas of the U.S. criminal justice system: pretrial and bail, sentencing, probation and parole, and juvenile justice. These algorithms consider a small number of variables about a defendant – either connected to her or his criminal history (previous offenses, failure to appear in court, violent offenses, etc.) or socio-demographic characteristics (age, sex, employment status, drug history, etc.) – in an effort to predict a defendant's risk of recidivism or their likelihood to fail to appear in court if they are let out on bail.

- Advocates for increased use of actuarial instruments highlight their potential to automate and standardize decision-making processes by considering relevant risk factors. They maintain that risk and needs assessment tools not only save time and money and make sentencing more accountable but also protect against human bias and curb discriminatory and racist sentencing practices.

- Critics argue that these initiatives are part of a new culture of control and surveillance. They raise concerns that predictive algorithms draw upon data that reflect bias, such as proxies for race, may not predict risk accurately, and may influence judicial discretion even if judges do not perceive that they are thus influenced

- Algorithms are fallible: they are constructed and implemented by a range of actors and their quality of their output varies with the resources of the organization, the size of the data set, the amount of missing data, and the sophistication of the modeling techniques used.

- Advanced risk assessment algorithms and the evidence-based sentencing practices that follow may be unconstitutional to the extent that defendants are treated and sentenced based on their membership to a specific group rather than on the basis of their individual actions.

- Currently, risk assessment tools are oriented around more quantitative objectives of risk reduction and incapacitation. Their growing use may change the way we think about incarceration, deprioritizing other goals such as retribution, deterrence, and rehabilitation.

- Risk assessment tools could be useful in generating data about the sentencing decisions of different judges, courts, jurisdictions, and states. This type of feedback, analyzed and interpreted by actors invested in improving criminal justice, has the potential to improve the current system.

Critical Questions

- What role should algorithms play in judicial decision-making? How can we ensure that these tools are used well?

- How can risk assessments be designed to effect how judges use override functions?

- How can data-driven sentencing be used to correct biases in the criminal justice system and reduce discrimination and mass incarceration?

- What types of variables should be included in the algorithms? How can we make sure that the variables do not increase inequality?

- There is limited empirical research on the efficacy of risk-assessment algorithms in producing more fair outcomes. How can we apply standards of algorithmic fairness to risk-assessment algorithms?

- How can we avoid a situation in which predictive algorithms become "black boxes" that cannot be fixed? Who has the power to change an algorithm? How do we ensure accountability?

- What training and resources do defense attorneys need to challenge algorithms that affect sentencing and other judicial decisions?

- Should a system of regular checks or audits by third parties be put in place? What processes should be in place to build trust around the algorithms themselves?

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