Answering Three Sociotechnical Questions

DATA&
SOCIETY

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A sociotechnical approach to AI recognizes that the technology's safety and real-world performance are about more than technical engineering, involving broader societal forces like organizational bureaucracy, labor practices, social conventions, and power. The following questions and their corresponding examples offer a starting point for policymakers to incorporate a sociotechnical approach to AI governance.

1. What are the systems around the technology?

Too often, policymakers focus strictly on technical engineering, while paying little attention to the role of broader social systems in determining a technology's outcomes. To better govern AI's safety, policymakers need to identify these "non-technical" social dynamics — decision-making hierarchies, modes of workplace communication, et cetera — and bring them into their policy analysis.

POLICY RECOMMENDATIONS

- Complement audits of AI's technical effectiveness with ongoing evaluations of real-world deployment — assessing impacts on people, communities, and environments in which an AI system is deployed.
- Fund research across a wide range of domains to build a stronger empirical base on the economic, environmental, social, and political impacts of AI systems.
- Ensure that the "AI workforce" includes scholars from a range of disciplines who are trained in the empirical study of social dynamics.

2. What is the problem this technology can actually solve?

Amid endless hype around AI's innovations, it's important for policymakers to remember that many technologies are poor fits for solving complex societal problems, and they can often make problems even worse. Governance frameworks should explicitly acknowledge the ways a technology might fail, setting brightline rules delineating where technologies are too unsafe to use and establishing procedures to enable recourse when individual and collective harms occur.

POLICY RECOMMENDATIONS

- Discontinue the use of AI where it fails to empirically demonstrate real-world effectiveness.

- Prohibit the use of AI in sectors where the stakes are too high regardless of technical accuracy, e.g., public benefits determinations or the criminal legal system.

- Require human recourse or appeal in instances when algorithmic systems fail.

3. What power inequalities are at play?

Seen through a sociotechnical lens, many technology problems are better understood as problems of power. By identifying the power asymmetries involved in tech R&D and deployment, policymakers can better locate the structural conditions that require policy intervention.

POLICY RECOMMENDATIONS

- Strengthen worker input in the deployment of workplace technologies, including by addressing unlawful employer interference of organizing and by prohibiting "chilling" uses of employer surveillance.

- Curtail the widespread collection of data through data minimization and/or prohibitions on data collection in high-risk cases, like mass biometric surveillance.

- To balance information asymmetries, mandate transparency and explainability of algorithmic systems.