Algorithmic Fairness in the Roberts Court Era

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Scientists and policymakers alike have increasingly been interested in exploring ways to advance algorithmic fairness, recognizing not only the potential utility of algorithms in biomedical and digital health contexts but also that the unique challenges that algorithms—in a datafied culture such as the United States—pose for civil rights (including, but not limited to, privacy and nondiscrimination). In addition to the technical complexities, separation of powers issues are making the task even more daunting for policymakers—issues that might seem obscure to many scientists and technologists. While administrative agencies (such as the Federal Trade Commission) and legislators have been working to advance algorithmic fairness (in large part through comprehensive data privacy reform), recent judicial activism by the Roberts Court threaten to undermine those efforts. Scientists need to understand these legal developments so they can take appropriate action when contributing to a biomedical data ecosystem and designing, deploying, and maintaining algorithms for digital health. Here I highlight some of the recent actions taken by policymakers. I then review three recent Supreme Court cases (and foreshadow a fourth case) that illustrate the radical power grab by the Roberts Court, explaining for scientists how these drastic shifts in law will frustrate governmental approaches to algorithmic fairness and necessitate increased reliance by scientists on self-governance strategies to promote responsible and ethical practices.

Keywords: Algorithmic Fairness; Privacy; Nondiscrimination; ELSI; Law; Policy

1. Introduction

Data scientists are increasingly aware of and concerned about the ethical dimensions and societal impact of their work, as evinced by many thought-provoking ethical, legal, and social implications (ELSI) workshops,[1-3] sessions,[4] and keynotes[5-9] at the Pacific Symposium on Biocomputing and other scientific conferences. Multidisciplinary collaborations comprising biomedical data scientists, bioethicists, and other subject matter experts continue to be encouraged.[10-11] Among the major topics of concern is algorithmic fairness, for which there are numerous articulations of what precisely that entails and proper measures of it.[12] Stated simply, from a data science perspective, algorithmic fairness refers to performance parity (demonstrated through specified metrics) across different groups of people and mitigation of computational biases.[13] From a legal perspective, fairness involves the "quality of treating people equally or in a reasonable way" or "the qualities of impartiality and honesty,"[14] and information privacy is oft-used as a mechanism to prevent bias and discrimination.[e.g.,15] Fairness and privacy are conceptually distinct yet closely connected in

biomedical data science and law, as limiting data that an algorithm can access, use, or disclose is viewed as a means to prevent unlawful, unfair discrimination. As worries grow regarding civil rights in a datafied culture such as the United States and as leaders call for reforms (such as an AI Bill of Rights[16-17]), it is essential that scientists and policymakers act together to advance algorithmic fairness in feasible and effective ways.

There have been considerable efforts in recent years, both within the scientific community and through public policy, to promote ethical data science.[e.g., 18] However, there has also been a recent and dramatic shift in the balance of power between the legislative, executive, and judicial branches prompting fears that the U.S. democratic "experiment" is set for failure.[19] Data scientists need to be aware of these developments and recognize the implications for their own work so that innovative alternative strategies to promote ethical and responsible data science practices can be designed, implemented, and refined. To facilitate awareness and stimulate further discussion among data scientists, I highlight some of the recent efforts taken by the Federal Trade Commission (FTC) and legislators to advance algorithmic fairness. I then offer a succinct review of three recent Supreme Court cases (*TransUnion LLC v. Ramirez*,[20] *Dobbs v. Jackson Women's Health Org.*,[21] and *West Virginia v. EPA*[22]) and foreshadow a fourth (*303 Creative LLC v. Elenis*[23]) that illustrate the Roberts Court's radical judicial activism and power grab, explaining how these shifts in law will frustrate governmental approaches to algorithmic fairness (including but not limited to fairness pursued through mandated data practices grounded in privacy principles). I conclude that the widening imbalance of powers along with instability and uncertainty of law necessitates an increased reliance by scientists on self-governance strategies to advance algorithmic fairness.

2. Recent Activity by the Federal Trade Commission to Advance Algorithmic Fairness

The FTC is responsible for preventing unfair and deceptive acts and practices in or affecting commerce, drawing its main authority from the Federal Trade Commission Act[24] and dozens of other statutes. In the absence of a specific federal statute on algorithmic fairness or comprehensive data privacy, the FTC can draw from its general authority to prevent bias and discrimination through compelling responsible data practices (such as privacy- and discrimination-aware design, reasonable bias mitigation protocols, or even diversity promoting measures) in digital health technologies. The FTC has not been using its unfairness authority to its full potential;[e.g., 25] however, the FTC's composition has shifted (with confirmations of Lina Khan as Chair and Alvaro Bedoya, a privacy law expert, as commissioner), and signs over the past two years suggest the FTC is ready to take bold steps to promote algorithmic fairness in and beyond digital health. For example, in January 2021, the FTC settled a case against Flo Health over data practices.[26] In April 2021, the FTC issued business guidance underscoring that racially biased algorithms are prohibited and warning that algorithmic performance (1) must not be exaggerated and (2) must be tested before and periodically after deployment to detect discriminatory outcomes.[27] In July 2021 the FTC announced regulatory priorities that included issues affecting the healthcare industry and technology platforms.[28] In Sept. 2021, the FTC issued a privacy and security report to Congress flagging its intention to pursue expanded remedies for unsavory data practices (such as disgorgement of ill-gotten gains) and to

focus on digital platforms, including development of guidance on health-related algorithms.[29] That same month in a statement regarding the FTC health breach notification rule,[30] Commissioner Slaughter explicitly called for the FTC to "lead a market shift toward data minimalism."[31] And in March 2022, the FTC took action against a weight loss app vendor to protect children's online privacy, requiring data deletion, destruction of algorithms developed with ill-gotten data, and a hefty monetary penalty.[32]

3. Recent Legislative Activity to Advance Algorithmic Fairness

Congress also has been actively working on several pieces of legislation that would provide comprehensive data protections and advance algorithmic fairness. Among the many consumer data protection bills being debated and developed in the 117th Congress are the Consumer Data Privacy and Security Act of 2021 (S. 1494); the Setting an American Framework to Ensure Data Access, Transparency and Accountability (SAFE DATA) Act (S.2499); and the Consumer Online Privacy Rights Act (S.3195). A bipartisan bill, the American Data Privacy and Protection Act (H.R.8152), has made it farther than any other, having been reported favorably out of House Committee on Energy and Commerce on July 20, 2022—just a month after it was formally introduced.[E.g.,33] Other legislative efforts to advance algorithmic fairness include, e.g., the Algorithmic Justice and Online Platform Transparency Act (S.1896, H.R.3611); Algorithmic Accountability Act of 2022 (S.3572, H.R. 6580); Protecting Americans from Dangerous Algorithms Act (S.3029, H.R.2154); the GOOD AI Act of 2021 and 2022 (S.3035 and H.R. 7296, respectively); Promoting Digital Privacy Technologies Act (S.224, H.R. 847); Digital Accountability and Transparency to Advance Privacy Act or DATA Privacy Act (S.3065, H.R. 5807); Federal Trade Commission Technologists Act of 2021 (S.3187, H.R.4530); and Digital Platform Commission Act of 2022 (S.4201, H.R. 7858).

4. Recent Activity by the Roberts Court that Will Undermine Algorithmic Fairness

Three cases are particularly illustrative of the dramatic shift in power instigated by the Roberts Court that will frustrate approaches to advance algorithmic fairness by the FTC and Congress: *TransUnion LLC v. Ramirez*[20] (which upended Article III Standing Doctrine[34] and weakened the powers of the legislative branch), *Dobbs v. Jackson Women's Health Org.*[19] (which obliterated the Stare Decisis Doctrine[35-36] and toppled U.S. Constitution-based privacy rights at least in so far as reproductive health decisions), and *West Virginia v. EPA*[22] (which weakened the powers of both the legislative and executive branch through its invention and embrace of the Major Questions Doctrine[37] and warming interest in the Nondelegation Doctrine[38]). A fourth case worth noting is *303 Creative LLC v. Elenis*[23,39] (which the Roberts Court agreed to review and which pits nondiscrimination rights directly against Free Speech rights). Indeed, as one respected law scholar has commented, "we are in the era of the imperial Supreme Court" in that the actions are reflective not of any particular judicial philosophy but an alarming concentration of power in the Supreme Court to the detriment of all others.[40 at 2] These actions are "making America ungovernable" with respect to the most pressing policy issues of today.[18]

4.1. *TransUnion LLC v. Ramirez*

The Roberts Court decided (5-4) *TransUnion LLC v. Ramirez* on June 25, 2021, with Justice Kavanaugh authoring the majority opinion. The case involved a class action lawsuit under the Fair Credit Reporting Act (FRCA) for improper data practices, with the class consisting of 8,185 individuals falsely characterized as "potential terrorists" and "drug traffickers" on credit reports and 1,853 individuals for whom these false and misleading credit reports were distributed to third-party businesses. At trial the jury had awarded the consumers $60 million in statutory and punitive damages for multiple willful FRCA violations.[20 at 2202] In what has been described by prominent privacy law scholars as a "profound usurpation of legislative power,"[41] the Court required injury-in-fact in order to establish there has been a "concrete harm" (a prerequisite for standing to sue in federal courts). The Court basically held "no harm, no foul"[42] for violations of data and disclosure practices mandated by statute and refused to acknowledge any "concrete harm" could have been incurred by those consumers for whom an inaccurate flag in their credit report was never disclosed to a third-party. At the core of its decision, the Court acknowledged, "Congress may 'elevate to the status of legally cognizable injuries concrete, *de facto* injuries that were previously inadequate in law;"[20 at 2204-2205 (internal citations omitted)] however, the Court distorted precedent set by *Spokeo, Inc. v. Robins,*[43] tethering lawmakers' ability to create remedies only for harms with a "close historical or common-law analogue."[20 at 2204] Substituting its judgment for Congress and the jury, the Court overlooked, ignored, or discounted the diversity of privacy-related harms that exist[44] and framed the controversy as a distinction between individuals suing to ensure regulatory compliance (which is not allowed for Article III standing) and individuals suing to redress "real and actual" harms incurred personally (which is required for Article III standing).

This case will have serious repercussions for enforceable data protection laws, as dataveillance (i.e., digital data surveillance) and data injustices of today would likely have no common law analog. This includes laws that would close gaps in protections and promote responsible data practices across HIPAA (Health Insurance Portability and Accountability Act[45]) and non-HIPAA contexts alike. The Roberts Court focused on disclosure of the false information analogizing this to defamation and otherwise dismissed inaccuracies about consumers—however horrible and stigmatizing and with whatever risks they cause downstream—unless those inaccuracies were disclosed to others. In a dissenting opinion, Justice Kagan noted the ruling had transformed Article III Standing Doctrine from "a doctrine of judicial modesty to a tool of judicial aggrandizement" and lamented that Congress—not the Supreme Court—was in the better position to determine whether "something causes a harm or risk of harm in the real world."[20 (dissent at 2225)]

Federal approaches for data privacy law reform (particularly those incorporating private causes of action as a key enforcement mechanism, a feature HIPAA lacks) might be for naught even if a bill is successfully passed by Congress and signed into law given, in light of *TransUnion*, what cases may be heard by federal courts. Thus, this case complicates debates about whether federal preemption of state data protection laws would be a pro or con for consumers[46] and generates uncertainty as to whether the Roberts Court, if given the opportunity, would deem harms established by any new federal data protection statute as "concrete" to allow consumers to have their day in court if statutory violations occur. This development does not bode well for

policymakers trying to use data practice measures to promote innovation and protect consumers in and out of digital health contexts.

4.2. *Dobbs v. Jackson Women's Health Org.*

The Roberts Court issued its bombshell opinion in *Dobbs v. Jackson Women's Health Org.* on June 24, 2022, with Justice Alito authoring the majority opinion. The case involved a constitutional challenge to the Mississippi Gestational Age Act, a forced birth law barring healthcare providers from providing pregnancy termination services after 15 weeks of gestation. The main holding was to uphold the law and overturn both *Roe v. Wade*[47] and *Planned Parenthood of Southeastern Pa. v. Casey*.[48] In addition to the effects of this case on the practice of medicine, news of the decision quickly prompted scholars to call attention to the far-reaching implications the case has for dataveillance enabled by digital health technologies.[e.g.49-54] Such technologies are not always within regulatory reach of HIPAA.[55] But even for data situated within the HIPAA regulatory environment, there is a law enforcement exception to the Privacy Rule.[56] In light of state laws that began to take effect with the *Dobbs* decision (e.g., Texas H.B. 8, designed to evade judicial review[57-58]), increased attention needs to be given to ensuring the privacy of health data and information.[59] Recognizing the possibility that laws containing "bounty hunter" enforcement mechanisms might incentivize people to disclose protected health information under cover of the law enforcement exception to the HIPAA Privacy Rule, guidance[60] was quickly issued by the Dept. of Health and Human Services Office of Civil Rights (OCR) emphasizing the narrowness of the exception and clarifying how obligations under HIPAA interact with, and prevail over, conflicting state laws with regard to data privacy and security requirements.[61]

There is understandable concern that the exceptions to the HIPAA Privacy Rule could swallow the rule in a post-*Roe* society. Additionally, there continues to be legal uncertainty in our modern datafied culture regarding the boundaries for reasonable expectations of privacy under the Fourth Amendment. In 2018 the Roberts Court in *Carpenter v. United States*[62] declined to put an end to the Third-Party Doctrine (a categorical rule that negates an individual's expectation of privacy if information is shared with or known by third parties and allows for warrantless searches)[E.g.,63] and instead allowed for the possibility of a preserved expectation of privacy in information exposed to third parties depending upon the "deeply revealing nature" of the information; "depth, breadth, and comprehensive reach"; and "inescapable and automatic nature of its collection."[64] Health information has a more established position as sensitive and worthy of protections than other types of information; however, biomedical databases, electronic health records, and health-related information in a wide array of settings are in danger of being more readily accessed and used against individuals.[e.g.,65] While the *Carpenter* ruling was purportedly narrow (perhaps merely creating a limited exception rather than a revision to the Third-Party Doctrine[66]), we must monitor how the Roberts Court construes privacy interests in health information generally. In response to the legal uncertainties, biomedical data scientists might try data minimization and use of synthetic data; however, such efforts might unintentionally exacerbate biases in digital health algorithms.

4.3. *West Virginia v. EPA*

On June 30, 2022, the Supreme Court issued its 6-3 ruling in *West Virginia v. EPA*[20] with the majority opinion authored by Chief Justice Roberts. The case involved a challenge the Affordable Clean Energy Rule promulgated in 2015[67] to implement updated performance standards under the Clean Air Act, a 50-year-old statute.[68] The rule had never taken effect, as it had been challenged by opponents, stayed pending litigation, and repealed in 2019.[69] A review of the text and legislative history indicated that the law to stop pollution and improve air quality was intended to provide the EPA with "regulatory flexibility" to avoid rapid obsolescence attributable to unavoidable "changing circumstances and scientific developments."[22 (dissent at 2622)] Nevertheless, the Court chose to exert control rather than practice judicial restraint, substituting its own views for those of Congress and the EPA. Cunningly, the Court purported to follow precedent to reach its decision despite the fact that the "Majority Questions Doctrine" upon which it relied was not even a term used by the Supreme Court—a point noted in the dissenting opinion.[22 (dissent at 2634)] In actuality, the Major Questions Doctrine is an independent theory that sidesteps administrative law precedent (i.e., the *Chevron* Doctrine, which has persisted since 1984).[37] The gist of the Major Questions Doctrine is that in "extraordinary cases" of any notable "economic and political significance," an agency has no authority to act (including to interpret ambiguity in an agency's explicit statutory authority to act) unless Congress has explicitly empowered the agency to do so.[22 at 2608]

The case is important for data scientists because the Roberts Court has fundamentally shifted how agencies can act when implementing and enforcing statutes once they (finally) have been passed by Congress. The Court has made clear that it will second-guess (1) Congress in the breadth and specificity of statutory text used and (2) agency interpretations of statutes (not only by the EPA but any administrative agency, including, e.g., the FTC, FDA, CMS, and others). Indeed, the Court explained that "extraordinary cases"—to which the Major Questions Doctrine presumably now applies—"have arisen from all corners of the administrative state."[22 at 2608] Put simply, statutes are increasingly at risk of being struck down by the Roberts Court pursuant to the Nondelegation Doctrine if any meaningful amount of discretion is given to agencies in the interest of enabling data-informed policy and regulatory flexibility—necessary features for effective governance when involving rapidly changing science, technologies, and applications. Similarly, regulations are increasingly at risk of being struck down pursuant to the newly christened Major Questions Doctrine as exceeding the enforcement authority delegated by Congress. For algorithmic fairness in particular, policy efforts thus far have largely been based on general authority rather than explicit, specific authorization by Congress. Any laws to advance algorithmic fairness now must require specification (exhaustive enumeration) of the "major" issues that the agency is permitted or required to resolve and provide the agency with "intelligible principles" for implementation.[70]

4.4. *303 Creative LLC v. Elenis*

It would be a mistake to assume that the Roberts Court will ease off from its activist turn when the 2022-2023 session begins. Among several cases the Court has agreed to hear that could signal further trouble is *303 Creative LLC v. Elenis*.[23] At issue is the Colorado Antidiscrimination Act challenged by a graphic designer who plans to, but does not yet, offer the design of wedding websites

and who does not want to offer such services for same-sex weddings. Throughout the litigation, Colorado has argued there is "nothing novel" about antidiscrimination laws that target businesses (i.e., commercial conduct)[71] and that the only speech affected is the ban on statements proposing illegal activity.[72] The Court agreed to hear the case on February 22, 2022, framing the question to be resolved as "[w]hether applying a public-accommodation law to compel an artist to speak or stay silent violates the Free Speech Clause of the First Amendment."[23]

Challenges to laws affecting commercial speech (for which the government typically has had more leeway to regulate than expressive, non-commercial speech) have traditionally been answered using the *Central Hudson* test.[73] Applying this test, a court will theoretically uphold a law restricting speech if the restriction is narrowly tailored (i.e., not more extensive than is necessary) and if the government has a "substantial" interest that is directly advanced by the restriction. This test arguably got harder for the government to overcome following *Sorrell v. IMS Health Inc*.[74] (a case in which a Vermont law imposing restrictions on the sale, disclosure, and use of pharmacy records and prescription information to detailers was struck down even though the stated intent of the law was to "protect medical privacy, including physician confidentiality, avoidance of harassment, and the integrity of the doctor-patient relationship"[74 at 2668]). There, the Supreme Court rejected the argument that the law targeted conduct and only incidentally burdened speech and instead framed the law as imposing impermissible content-based and speaker-based restrictions. According to one scholar, "[n]o commercial speech restriction has passed the *Central Hudson* test in decades, and it is now unclear whether a restriction on non-deceptive commercial speech can ever pass this test."[75]

The Roberts Court has decided a wide array of First Amendment cases,[76] earning criticism for having "turned the first amendment into a weapon" for "conservative interests."[77] While privacy law scholars have long indicated that data privacy laws are not properly envisioned within First Amendment space[78] such claims predated the provocative decision in *TransUnion. 303 Creative LLC v. Elenis* needs to be watched carefully by data scientists. Whether algorithms (or more specifically data, coding, and algorithmic outputs) can or will be considered "speech" remains an open question (although the Supreme Court in *Sorrell* suggested without deciding that "the creation and dissemination of information are speech for First Amendment purposes"[74 at 2657]). Resolving this question is left for separate in-depth discussion.[79-85] Nevertheless, one can speculate that the extent to which data minimalism and privacy-by-design practices can be lawfully required by Congress or administrative agencies (whether the FTC or FDA) might hinge, according to the Roberts Court, on whether such mandates are "compelled silence" and, similarly, the constitutionality of mandated nondiscrimination-by-design principles might hinge on viewing them as "compelled speech" as opposed to mandated conduct.[See also 86-87] Commercial speech restrictions are unlikely to pass muster if the Roberts Court applies something more than rational basis review, which is likely given the expansive protections it has extended to corporate expression over the past decade.[See 75]

The way in which the Roberts Court framed the question to be decided in *303 Creative LLC v. Elenis* suggests it is ready to expand the notion that anti-discrimination laws cannot regulate commercial speech as a public accommodation because "eliminating discriminatory bias [is] a

'decidedly fatal objective' in light of a Free Speech challenge."[88] If so, and if the Roberts Court views data or algorithms as speech, it could become all but impossible for the government to impose responsible requirements to advance algorithmic fairness (whether through data privacy or nondiscrimination mechanisms). With this in mind, and also recognizing that Section 1557 of the Affordable Care Act—the omnibus nondiscrimination provision for health activities—continues to be revised (including a proposed rulemaking announced in August 2022 that would apply to use of algorithms in clinical decision-making[89-90]), politicized, and challenged, alarm bells are properly being rung for the future of civil rights under the Roberts Court.[91-93]

5. Discussion

Given the above highlights, it seems clear that government-imposed data practice rules (e.g., regarding collection, management, processing, and disclosures) to promote algorithmic fairness and equal participation in, access to, and shared benefits and burdens of digital health and biomedical data science are going to be extremely difficult to realize in the Roberts Court era. First, such approaches might be considered as mere attempts to elevate harms that are "non-existent" or having no 1776 analog, thus leaving plaintiffs without adequate standing to have cases settled in federal courts. Second, if data and algorithmic outputs are viewed as speech, data protection laws of all sorts would be in direct tension with First Amendment protections. It seems at least plausible that privacy-by-design (although likely not nondiscrimination-by-design) measures could be considered content neutral "manner" restrictions if crafted carefully.[See 94] Third, rules to combat data biases and discrimination and advance algorithmic fairness could be considered content-based compelled speech and subjected to heightened or strict scrutiny review. With the Roberts Court taking a broad view of the First Amendment, this could spell bad news for the FTC with its more aggressive approach toward data-related policies.

With all of the legal gaps and uncertainties, now more than ever it is incumbent upon the biomedical data science community to develop and adopt self-governance strategies to advance algorithmic fairness. Contracts between individuals and entities can be used to mandate certain behaviors (including data practices and algorithmic uses), and terms of service and privacy policies should be examined and revised as appropriate. Moral clauses can address matters of ethical significance and impose duties not otherwise required by law (including performance of privacy-by design practices and due diligence to detect and remedy biases in algorithms). Feedback mechanisms are needed to incentivize responsible and deter detrimental conduct in a biomedical data ecosystem, including, e.g., mechanisms for reporting biased algorithms, removing them from further use, and correcting them. Professional societies have a role to play as well by establishing practice norms and guidance and setting enforceable codes of conduct for their members. Self-governance strategies to advance algorithmic fairness will continue to require multidisciplinary collaborations and policy-focused research, so opportunities to connect on such issues in meaningful, focused, and psychologically safe ways (e.g., new or recurring Innovation Labs[10]) should be supported and prioritized.

Acknowledgments

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