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Public Law and Technology: Mapping and Analysing Legal Responses in UK Civil Society

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Introduction

1. Many civil society organisations are now examining and responding to the implications of developing technologies for state power and the laws, practices and institutions that allocate and control it. This should be no surprise given that the public sector is making increasing and varied use of the new digital tools at its disposal. In this article, we map and analyse how civil society organisations in the UK are responding to these developments from a public law perspective.

2. There are at least three different ways to analyse the landscape. One way examines the functions that different organisations perform. Another looks at the normative and analytical frameworks that they use in their work. A third concerns the substantive issues at the centre of current debates over public law and technology. We consider each of these perspectives in turn.

3. From each of these perspectives, civil society organisations in the UK are doing important work that is quickly evolving. We suggest some future directions for work in this vast, complex and dynamic field that require further attention, namely: (a) training for practitioners, public decision-makers and the judiciary; (b) the development of, what could be called, a distinctively public law approach; and (c) further work on automated decision-making, state databases and online courts and tribunals.

Functions

4. Organisations perform three main functions in the field of government technology. The first is advocacy and litigation. Organisations engage in advocacy and litigation to defend the legal rights and interests of specific people or groups, to draw attention to systemic problems in the legal system, and to persuade lawmakers and judges to address those problems. Key advocacy and litigation organisations in the UK include Liberty, Privacy International, Big Brother Watch and Amnesty International. New specialist organisations, such as Foxglove, are also emerging. Some organisations indirectly engage with public law and technology issues. For instance, the Child

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Poverty Action Group works on issues involving technology (e.g. the Universal Credit system), but has no declared specific focus on technology as such.[1]

5. The second main function is research. Organisations engage in research to better understand how systems work and whether evidence demonstrates that normative or legal standards are being met. The line between research on the one hand, and advocacy and litigation on the other, is not sharp. Many organisations engage in research that then informs and reinforces their campaigns or casework. However, there is a range of organisations for which research is a primary function. The key research organisations in this context are the Alan Turing Institute, the Human Rights, Big Data and Technology Project at Essex University, the Data Justice Lab at Cardiff University, the Bingham Centre for the Rule of Law, The Legal Education Foundation, and JUSTICE. Some international research organisations, such as AlgorithmWatch and Access Now, also engage with UK developments.

6. The third main function is training. This can be best understood as ancillary to the other two functions. Training gives other people the skills and understanding to engage in effective advocacy and litigation, or to undertake meaningful research. The key training organisations in the UK are the Digital Freedom Fund and the School of Data. The Digital Freedom Fund is a non-profit based in Amsterdam, but operates across Europe. It aims to support individuals and organisations to advance digital rights through strategic litigation. Digital Freedom Fund focuses more on bringing together litigators and advocates from elsewhere to discuss strategies and share knowledge, rather than itself providing substantive training.[2] A good example of work in this area is The School of Data, which is a network of people and organisations that aims to empower civil society to use data effectively. It was established by the Open Knowledge Foundation, a London-based non-profit that has similar goals. The School of Data is currently developing a "Data, Algorithms and AI for Lawyers" course. There are also some online resources in this area. Most focus on algorithms and machine learning in general,[3] but there are some limited resources focused on machine learning for lawyers in particular.[4]

7. At present, the training function appears to be where the civil society response is thinnest. In our view, there is a clear need in the UK for training on public law and

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[1] See Sophie Howes and Kelly-Marie Jones, "Computer says 'no!' Stage one: information provision" (Child Poverty Action Group, May 2019); Sophie Howes and Kelly-Marie Jones, "Computer says 'no!' Stage two: challenging decisions" (Child Poverty Action Group, July 2019).

[2] The Digital Freedom Fund is currently developing a set of guides to support litigation on AI and human rights. See Jonathan McCully, "A project to demystify litigation and artificial intelligence" (Digital Freedom Fund Blog, 6 December 2019) <https://digitalfreedomfund.org/a-project-to-demystify-litigation-and-artificial-intelligence> (accessed 17 December 2019).

[3] For example, Stanford University offers a four-course online "specialization" in algorithms through Coursera. See Coursera, "Algorithms" <www.coursera.org/specializations/algorithms> (accessed 17 December 2019).

[4] Academics at the Illinois Institute of Technology have put some of the materials for their "Legal Analytics" course online. See Daniel Martin Katz and Michael J. Bommarito II, "Legal Analytics Course" (2016) <www.legalanalyticscourse.com> (accessed 17 December 2019). The University of Ottawa has also created an introductory online course on legal data science. See Wolfgang Alschner, "Data Science for Lawyers" (University of Ottawa, 2019) <www.datascienceforlawyers.org> (accessed 17 December 2019).

technology for specific audiences (e.g. practitioners, public decision-makers and the judiciary). Take, for example, automated decision-making in government (as discussed elsewhere in this issue of *Judicial Review* in detail). This means that public lawyers must understand automated government decision-making. They must, at a minimum, understand: (a) automated systems and how they are used in government; (b) the laws governing automated government decision-making, including public law, human rights law, data protection law and equality law; and (c) the actual practice of challenging automated decisions in court. No existing training resources appear to meet this need.

Analytical and normative frameworks

8. Organisations use two main normative and analytical frameworks: one focuses on transparency, the other on human rights. These frameworks help organisations understand and analyse complex issues and determine responses.

9. The transparency framework focuses on the barriers to public knowledge and understanding of the government's use of technology. It primarily directs attention to the following questions: What do we know about how government is actually using technology? How can we obtain more information? And what level of information is required for effective legal and political accountability?

10. In many instances, organisations first uncover how the government is using technology, before then conducting a more detailed human rights analysis of their findings. For instance, in 2019 Liberty highlighted police use of predictive mapping programs and individual risk assessment programs, based on 90 freedom of information requests to police forces across the UK.[5] Similarly, in 2018, Big Brother Watch published research on police use of automated facial recognition (AFR) technology, based on over 50 freedom of information requests.[6] Liberty is now bringing human rights litigation on the use of AFR technology in policing.[7]

11. Other organisations focus on transparency as an end in itself. AlgorithmWatch has created a database of over 150 automated systems that affect access to important goods and services and the enjoyment of civil liberties in Germany.[8] Algorithm Tips is an online database of algorithms currently used by the US federal government, maintained by several journalism academics at Northwestern University.[9] The AI Now Institute at New York University has compiled a list of automated systems used by governments in the US.[10] Similarly, MuckRock, a non-profit, collaborative news

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[5]Hannah Couchman, *Policing By Machine* (Liberty, January 2019).
[6]Silkie Carlo, Jennifer Krueckeberg and Griff Ferris, *Face Off: The lawless growth of facial recognition in UK policing* (Big Brother Watch, May 2018).
[7]*R (Bridges) v Chief Constable of South Wales* [2019] EWHC 2341 (Admin).
[8]AlgorithmWatch, "Atlas of Automation: Automated decision-making and participation in Germany" (April 2019).
[9]Nick Diakopoulos, Daniel Trielli and Seungmok Baek, "Algorithm Tips" (Northwestern University) <http://algorithmtips.org> (accessed 17 December 2019).
[10]AI Now Institute, "Automated Decision Systems: Examples of Government Use Cases" (11 April 2019) <https://ainowinstitute.org/nycadschart.pdf> (accessed 17 December 2019).

site, has begun to build an open, searchable database of how US local governments use big data, AI and algorithms.[11]

12. There are few organisations in the UK doing similar work to AlgorithmWatch, Algorithm Tips, the AI Now Institute and MuckRock. In November 2018, researchers at the Data Justice Lab at Cardiff University published detailed research on data analytics in public services. They focused on six case studies in areas such as fraud, health, child welfare, social services and policing.[12] It is unclear whether and to what extent this empirical research will continue. The Bureau of Investigative Journalism has recently begun to investigate how big data, algorithms, machine learning and AI are increasingly affecting people's lives.[13] This project is still in its early stages.

13. This analysis highlights a need for more individuals and organisations – particularly those with legal expertise or who are working on legal issues – to help shed light – ideally systematically – on the UK government's use of technology. UK organisations seem to rely principally on freedom of information requests to bring transparency to this aspect of government, and there is potential to explore a wider range of techniques.[14]

14. Many organisations use a human rights framework to analyse government uses of technology. It focuses on how technology interferes with human rights and the legality of such interferences. Using the tools of human rights law, this framework typically directs attention to the following questions: Does a government decision interfere with a human right protected by a domestic or international legal instrument? If so, and if the human right is not absolute, is there a legal basis for the decision? Is there a reasonable justification for the decision? And is there access to an adequate remedy for any violation of human rights? This framework is used by most of the major UK organisations in this space, including Liberty, Privacy International, Big Brother Watch, Amnesty International, Open Rights Group, Access Now and the Human Rights, Big Data and Technology Project.[15]

15. The human rights framework has a range of strengths. Human rights focus attention on the harms to important human interests that might flow from applications of technology. They are widely accepted as basic standards in countries around the world and

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[11]MuckRock, "Algorithmic Control: Automated Decisionmaking in America's Cities" <www.muckrock.com/project/uncovering-algorithms-84> (accessed 17 December 2019).

[12]Lina Dencik and others, *Data Scores as Governance: Investigating uses of citizen scoring in public services* (Data Justice Lab, December 2018).

[13]See The Bureau of Investigative Journalism, "Decision Machines" <www.thebureauinvestigates.com/projects/decision-machines> (accessed 17 December 2019).

[14]Upturn, a non-profit based in Washington DC, has done important research on the different ways in which the public can scrutinise, understand and govern automated decisions. See Aaron Rieke, Miranda Bogen and David G. Robinson, *Public Scrutiny of Automated Decisions: Early Lessons and Emerging Methods* (Upturn and Omidyar Network, 27 February 2018).

[15]There are, of course, exceptions. See e.g. Swee Leng Harris, "Data Protection Impact Assessments as Rule of Law Governance Mechanisms" (Bingham Centre for the Rule of Law, 3 June 2019) <https://zenodo.org/record/3237865#.XfkQIGT7TIU> (accessed 17 December 2019), which analyses government data processing from the perspective of the rule of law.

at the international level. And they clearly allocate responsibility, by imposing a set of duties and expectations on governments and businesses. Those duties and expectations can apply across the whole technology life cycle, rather than being confined to problematic deployments of technology.[16]

16. But the human rights framework, as it is used in practice, also has limitations. One limitation is that it tends to be anchored to particular human rights. It often focuses on those rights most clearly implicated by new technologies: privacy, non-discrimination and civil liberties (e.g. freedom of speech and association). And it focuses on those technologies that most clearly affect privacy, non-discrimination and civil liberties. Given this, it is no coincidence that the key issues in public law and technology have been state and corporate surveillance, online platforms and democratic freedoms.[17] This work is undoubtedly important, but technology raises issues for government and society that go beyond privacy, non-discrimination and core civil liberties, so other frameworks can be both useful and necessary.

17. Another limitation of the human rights framework is that it often focuses principally on the outcome of a government decision, rather than the procedure by which it was made.[18] What matters is "whether the human rights of the claimant have in fact been infringed", not "whether the administrative decision-maker properly took them into account".[19] The human rights framework may thus give less centrality to procedural values, such as whether the decision-maker reasoned appropriately and whether affected persons had an opportunity to participate in the decision-making process.

18. The human rights framework also tends to emphasise the questions of interference, legal basis and justification, rather than the question of remedy. It tends to concentrate on the following issues: How does a particular technology interfere with substantive human rights, such as the rights to privacy or freedom from discrimination? Is there a clear legal basis for the use of the technology? Is there any independent oversight? The conclusion is often that the technology unjustifiably interferes with human rights and that the government should cease to use it. But this is only part of a bigger, public law picture, which includes both the government's actions and people's ability to respond to and challenge those actions. The latter raises a different and important range of

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[16]See Lorna McGregor, Vivian Ng and Ahmed Shaheed, "The Universal Declaration of Human Rights at 70: Putting Human Rights at the Heart of the Design, Development and Deployment of Artificial Intelligence" (The Human Rights, Big Data and Technology Project, 20 December 2018); Lorna McGregor, Daragh Murray and Vivian Ng, "International human rights law as a framework for algorithmic accountability" (2019) 68 *International and Comparative Law Quarterly* 309.

[17]See the analysis in the next section.

[18]See *R (SB) v Governors of Denbigh High School* [2006] UKSC 15, [2007] 1 AC 100 at [29], [31] (Lord Bingham); *R (Nasseri) v Secretary of State for the Home Department* [2009] UKSC 23, [2010] 1 AC 1 at [14] (Lord Hoffmann).

[19]*Belfast City Council v Miss Behavin' Ltd* [2007] UKSC 19, [2007] 1 WLR 1420 at [31] (Baroness Hale). Of course, procedure is still relevant to a human rights analysis. It affects the weight that a reviewing court will attach to the original decision-maker's judgments, and it forms part of the content of some rights, such as the rights to a fair trial and to respect for private life. See *R (SB) v Governors of Denbigh High School* [2006] UKSC 15, [2007] 1 AC 100 at [34] (Lord Bingham); *Belfast City Council v Miss Behavin' Ltd* [2007] UKSC 19, [2007] 1 WLR 1420 at [15] (Lord Hoffmann), at [37] (Baroness Hale).

issues: What kinds of grievances are likely to arise from the government's actions? By which avenues can a grievance be raised and the actions reviewed? Are they accessible: physically, epistemically, financially? Who is the reviewer and what remedial powers do they have? What evidence does a person need to realistically raise a grievance, and do they practically have access to it? How quickly can the reviewer hear a challenge and provide a remedy? What are the applicable time limits? What advice and support is available for people engaging with these procedures?

19. This mapping of the current landscape suggests that what may broadly be called a traditional public law framework could make a distinct and valuable contribution. It could, for instance, focus on questions such as:

 (a) *Legal basis*: Is there a legal basis for the use of technology? Who specifically is required or authorised by law to use the technology? Are they impartial and independent?

 (b) *Fair decision*: Is the decision-maker addressing the right issue, asking the right question or applying the right test? Is the technology being used for a proper purpose?

 (c) *Reasoning*: Is the decision-maker failing to consider any very important factors, or considering something that is clearly irrelevant? Is the decision-maker making a serious and obvious error of fact? Is the decision-maker reasoning illogically?

 (d) *Fair process*: Has the decision-maker given affected persons notice of the decision and a chance to have a say?

 (e) *Consistency*: Does the decision-maker have a policy or a practice in this area? Are they applying it rigidly? Alternatively, if they are departing from it, do they have good reasons for doing so?

 (f) *Outcome*: Is the outcome clearly wrong on the merits?

 (g) *Explanation*: Are the people affected by the decision given an intelligible explanation afterwards?

 (h) *Systemic risks*: Does the decision-making structure create systemic risks in any of these areas?

20. As to the avenues by which people can challenge government decisions, a public law framework might consider the following questions:

 (i) *Types of grievances*: What kinds of grievances are likely to arise from this decision or decision-making structure?

 (j) *Reviewer*: Who is hearing the challenge to the decision? To what extent is the reviewer independent of the original decision-maker? Do they have any expertise?

 (k) *Remedy*: What can the reviewer do to remedy the person's grievance with the original decision?

 (l) *Accessibility*: Are the avenues accessible? Are people aware of them? Can they physically access them? How complex are the processes for accessing them? How expensive are they?

(m) *Scope and intensity*: What range of factors can the reviewer consider in reviewing the original decision? How stringently can the reviewer examine those factors?

(n) *Evidence*: What evidence does the person need to realistically challenge the decision? Do they practically have access to it?

(o) *Speed*: How quickly can the reviewer hear a challenge and provide a remedy?

(p) *Time limits*: What are the applicable time limits?

(q) *Advice and support*: What forms of advice and support are available for people engaging with these grievance procedures?

21. Of course, this public law framework overlaps with the other two frameworks, because transparency and respect for human rights are important aspects of public law. Our aim is not to stake out any exclusive territory for a public law framework, but to show how relating technological developments to traditional public law concerns can bring other issues into view.

22. The public law framework sketched above can make a distinct and valuable contribution to the civil society response in the UK for a range of reasons. First, it has general application to government decision-making. It can be used to analyse and critique the government's use of technology in any area. Its focus is on lawful, fair and reasonable public decision-making in general, rather than the protection of the specific rights set out in domestic and international instruments. Privacy, non-discrimination and civil liberties may not be the main or only values at stake in a particular case. The public law framework brings a different perspective to such cases. Second, the public law framework considers both procedures and outcomes. It looks intensively at how government reaches its decisions, not simply at the decisions themselves. Third, the public law framework is concerned with how government makes decisions, and how a person can raise a grievance with a particular decision. Fourth, the public law framework has a positive element. It directs attention not only to the negative constraints on public officials, but also to their positive power to promote the common good.[20]

Substantive focus

23. Most of the civil society response to government technology has centred on two substantive themes. The first is state surveillance. There has been a vast amount of work on how technology has transformed the state's ability to monitor and control its citizens. It spans bulk communications surveillance, CCTV cameras, AFR technology, body-worn cameras, on-the-spot fingerprint scanners, IMSI catchers, and mobile phone extraction. The second key theme is online platforms and democratic freedoms. This

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[20]Joe Tomlinson, *Justice in the Digital State* (Bristol University Press, 2019), 5; Jeremy Waldron, "Constitutionalism: A Skeptical View", in *Political Political Theory* (Harvard University Press, 2016), pp. 23, 29–37. See also Lucinda Platt, Maurice Sunkin and Kerman Calvo, "Judicial Review Litigation as an Incentive to Change in Local Authority Public Services in England and Wales" (2010) 20 *Journal of Public Administration Research and Theory* 243.

work examines how technology facilitates and hinders people's participation in civic society and democratic processes. It examines the use of personal data to micro-target political advertising, government and corporate regulation of online speech, online identification and age checks, transparency in online advertising, and other similar issues. The focus on these two themes reflects, at least in part, the predominance of the human rights framework in this area. But at least three other, pressing issues would warrant greater attention under a public law framework of the kind outlined above.

24. The first is automated government. Automated decision-making has become a central tool of modern government. In the UK, public authorities use algorithms and big data to process claims for Universal Credit and Personal Independence Payments,[21] assess visa applications and applications under the EU Settlement Scheme,[22] and predict whether children are at risk of abuse or "gang exploitation",[23] among other things.[24] Liberty and Big Brother Watch have done important work on automated decision-making in the specific context of law enforcement and criminal justice (specifically, predictive policing and AFR technology).[25] Privacy International has begun to consider automated decision-making in welfare and immigration, although its work is focused partly on the US.[26] The Human Rights, Big Data and Technology Project and the Data Justice Lab both research automated government decision-making in the UK. But the public law framework has a lot more to say about automated government in the UK. There is a gap in research, advocacy and litigation in this area from a public law perspective.[27]

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[21]United Nations Special Rapporteur on extreme poverty and human rights, *Statement on Visit to the United Kingdom* (16 November 2018) <www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=23881> (accessed 17 December 2019); Robert Booth, "Benefits system automation could plunge claimants deeper into poverty", *The Guardian* (14 October 2019) <www.theguardian.com/technology/2019/oct/14/fears-rise-in-benefits-system-automation-could-plunge-claimants-deeper-into-poverty> (accessed 17 December 2019); Shaun Williamson, "How we are using robotics and intelligent automation" (Government Computing, 23 April 2018) <www.governmentcomputing.com/central-government/features/how-we-are-using-robotics-and-intelligent-automation> (accessed 17 December 2019).

[22]Henry McDonald, "AI system for granting UK visas is biased, rights groups claim", *The Guardian* (29 October 2019) <www.theguardian.com/uk-news/2019/oct/29/ai-system-for-granting-uk-visas-is-biased-rights-groups-claim> (accessed 17 December 2019); Joe Tomlinson, *Quick and Uneasy Justice* (Public Law Project, July 2019).

[23]Niamh McIntyre and David Pegg, "Councils use 377,000 people's data in efforts to predict child abuse", *The Guardian* (16 September 2018) <www.theguardian.com/society/2018/sep/16/councils-use-377000-peoples-data-in-efforts-to-predict-child-abuse> (accessed 17 December 2019); Dencik and others (n. 12 above), pp. 55–73.

[24]See generally House of Commons Science and Technology Committee, *Algorithms in decision-making: Fourth Report of Session 2017–19* (HC 351, 2018).

[25]See Hannah Couchman, *Policing By Machine* (Liberty, January 2019); Hannah Couchman, "Liberty's Briefing on Police Use of Live Facial Recognition Technology" (Liberty, October 2019); Carlo, Krueckeberg and Ferris (n. 6 above).

[26]See Privacy International, "When Big Brother Pays Your Benefits" <https://privacyinternational.org/campaigns/when-big-brother-pays-your-benefits> (accessed 17 December 2019); Privacy International, "The 'Undeserving Poor:' A framework for researching and challenging aspects of social benefits systems that surveil, control, and punish people" <http://privacyinternational.org/researching-social-benefits> (accessed 17 December 2019); Privacy International, "Protecting migrants at borders and beyond" <https://privacyinternational.org/campaigns/protecting-migrants-borders-and-beyond> (accessed 17 December 2019).

[27]There is a small but growing literature in this area. See e.g. Katie Miller, "The Application of Administrative Law Principles to Technology-Assisted Decision-Making" (2016) 86 AIAL Forum 20, 16; Cary Coglianese and David Lehr, "Regulating by robot: administrative decision making in the machine-learning era" (2017) 105 *Georgetown Law Journal* 1147; Marion Oswald, "Algorithm-assisted decision-making in the public sector: framing the issues using administrative law rules governing discretionary power" (2018) 376 *Philosophical Transactions of the Royal Society* 2128; Jennifer Cobbe, "Administrative Law and the Machines of Government: Judicial Review of Automated Public-Sector Decision-Making" (2019) 39 *Legal Studies* 636; Makoto Hong Cheng

25. The second issue is state databases. Governments are increasingly using big data and digital watchlists to decide whether people are eligible for benefits or vulnerable to state interference.[28] The Metropolitan Police Service maintains the Gangs Violence Matrix, a database of suspected gang members in London, which is shared with the Home Office, local authorities, housing associations and schools.[29] UK government departments share large amounts of data to facilitate the Home Office's immigration enforcement activities, and to enable agencies to check a person's immigration status when they access a good or service.[30] When the UK leaves the EU, this framework may be used to target European Economic Area nationals working and living in the UK.[31] Local governments use similar tools. Bristol City Council maintains the Think Family Database, a database of about 54,000 families in the area. It uses the database to generate a child exploitation risk score for every young person in the area, which acts as a trigger for case workers to engage the relevant family.[32] Camden Council maintains the Camden Resident Index, a database that aggregates information from 16 different council business systems to create a "single view of a citizen". The Index is used to detect fraud (e.g. illegal subletting or fraudulent benefits claims) and to manage eligibility for services.[33]

26. Advocacy groups in the US have for some time drawn attention to the perils of these kinds of databases, particularly "kill lists" and "no fly" lists targeting suspected terrorists. In September 2019, the US District Court held that the inclusion of US citizens in a "terrorist screening database" was unconstitutional.[34] These databases make people particularly vulnerable to the exercise of the state's power. They also create significant risks of abuse. As Lord Browne-Wilkinson noted in *Marcel v Commissioner of Police of the Metropolis* [1991] 2 WLR 1118 at 1130:

> if the information obtained by the police, the Inland Revenue, the social security offices, the health service and other agencies were to be gathered together in one file, the freedom of the individual would be gravely at risk. The dossier of private information is the badge of the totalitarian state.

27. The issue of state databases is closely related to, but distinct from, that of automated government discussed above. Governments apply automated systems to their databases to generate insights or predictions. Consider the example of AFR technology.

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and Hui Choon Kuen, "Towards a Digital Government: Reflections on Automated Decision-making and the Principles of Administrative Justice" (2019) 31 SAcLJ 875; Paul Daly, "Artificial Administration: Administrative Law in the Age of Machines" (25 November 2019) <https://doi.org/10.2139/ssrn.3493381> (accessed 17 December 2019).

[28]See generally Margaret Hu, "Big Data Blacklisting" (2016) 67 *Florida Law Review* 1735.
[29]See generally Amnesty International UK, *Trapped in the Matrix: Secrecy, stigma, and bias in the Met's Gangs Database* (May 2018).
[30]See Gracie Mae Bradley, *Care Don't Share: Hostile Environment Data-Sharing: Why We Need a Firewall Between Essential Public Services and Immigration Enforcement* (Liberty, December 2018).
[31]See Swee Leng Harris, "Could automated immigration enforcement create 'the new Windrush' for EU nationals?" <https://www.kcl.ac.uk/news/could-automated-immigration-enforcement-create-the-new-windrush-for-eu-nationals> (accessed 13 January 2020).
[32]Dencik and others (n. 12 above), pp. 27–35.
[33]Ibid. pp. 48–54.
[34]*Elhady v Kable*, Case 1:16-cv-00375-AJT-JFA, 4 September 2019.

One issue with AFR technology is the automated system by which a camera captures a person's image, processes it to create a biometric identifier, compares the identifier to a police watchlist, and then alerts a police officer about whether to engage the person. This raises a range of problems: it interferes with the privacy of the person whose image is captured and processed; it may be wildly inaccurate; and it may operate in a discriminatory way. A different issue is the police watchlist itself, which raises human rights and broader public law issues. If the police include a person on a watchlist, they not only systematically collect the person's private, sensitive information, but they also make the person vulnerable to interference with their affairs. This raises questions about the process and framework that should govern the watchlist's maintenance and use.

28. There has been some work in the UK on this issue. Liberty has reported on data sharing as part of the government's "hostile environment" policy,[35] and has uncovered the extent of the Prevent database.[36] Similarly, Amnesty International UK has examined the Gangs Violence Matrix in detail, concluding that it contravenes international human rights law.[37] The Data Justice Lab has explored the use of citizen scoring by public authorities across the UK.[38] And there has been litigation by people challenging their inclusion on these databases under human rights and data protection law.[39] There remains room for a stronger public law voice in the UK on this emerging mode of administration, and a more systemic analysis of the use of these databases across government.

29. The third issue is the interaction between public law norms and online courts and tribunals. In 2016, the UK government launched a dramatic programme of reform for courts and tribunals in England and Wales. The goal is to "modernise and upgrade the justice system" so that it is just, proportionate and accessible to everyone.[40] A key plank of the programme is digitisation – having more and more cases carried out online. This reform programme raises a range of important research questions, including: How does digitisation enhance or impede access to justice? How effective are the government's "assisted digital" services in helping those at risk of digital exclusion? What kind of procedures do and should online courts and tribunals use? How do these procedures compare with principles of procedural fairness and other common law values? How might these procedures affect

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[35]Bradley (n. 30 above).

[36]See Jamie Grierson, "Counter-terror police running secret Prevent database", *The Guardian* (6 October 2019) <www.theguardian.com/uk-news/2019/oct/06/counter-terror-police-are-running-secret-prevent-database> (accessed 17 December 2019).

[37]Amnesty International UK (n. 29 above).

[38]Dencik and others (n. 12 above), pp. 27–35.

[39]See *R (Butt) v Secretary of State for the Home Department* [2019] EWCA Civ 256, [2019] 1 WLR 3873; *Catt v United Kingdom* (Application No. 43514/15).

[40]Ministry of Justice, Lord Chancellor, Lord Chief Justice, Senior President of Tribunals, *Transforming Our Justice System* (September 2016), pp. 3–4.

substantive decision-making? How do people engage with and experience online courts and tribunals?[41]

30. Some UK organisations are doing research and advocacy work in this area, notably JUSTICE,[42] The Legal Education Foundation,[43] Transform Justice[44] and the Bingham Centre for the Rule of Law,[45] among others. Given the scale of these reforms, there remains a clear need for research on the government's reform programme and the implications of a digital justice system. In particular, there is "a dearth of concrete empirical evidence" of the performance of online dispute resolution and related technologies such as video link hearings.[46] In *R (Kiarie) v Secretary of State for the Home Department* [2017] UKSC 42, [2017] 1 WLR 2380 at [67], Lord Wilson noted that a video link hearing may not be an adequate substitute for a hearing in person, particularly if it undermines a party's ability to present their case and the judge's "control and supervision" of the courtroom. But this is merely the start, not the end, of the enquiry. To determine whether and how these reforms threaten both access to justice and public law principles, and what might be an appropriate response, it is necessary to discover how parties and judges actually behave in and experience a digital justice system.

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[41]See Robert Thomas and Joe Tomlinson, *The Digitalisation of Tribunals: What we know and what we need to know* (Public Law Project, 5 April 2018), pp. 26–32. See generally House of Commons Justice Committee, *Court and Tribunal Reforms* (30 October 2019), pp. 68–72.

[42]See e.g. JUSTICE, *Preventing Digital Exclusion from Online Justice* (April 2018).

[43]See e.g. Natalie Byrom, *Digital Justice: HMCTS data strategy and delivering access to justice* (The Legal Education Foundation, October 2019).

[44]See e.g. Penelope Gibbs, *Defendants on video – conveyor belt justice or a revolution in access?* (Transform Justice, October 2017).

[45]Jack Simson Caird and others, "Written evidence from the Bingham Centre for the Rule of Law to the Justice Committee Court and Tribunal Reforms inquiry" (30 April 2019) <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/justice-committee/hmcts-court-and-tribunal-reforms/written/97828.html> (accessed 17 December 2019); Michael Olatokun, "Courts are becoming modern but may leave many behind" (Bingham Centre for the Rule of Law, 15 November 2019) <https://binghamcentre.biicl.org/comments/73/courts-are-becoming-modern-but-may-leave-many-behind> (accessed 17 December 2019).

[46]House of Commons Justice Committee (n. 41 above), p. 64.