Judicial Review Evidence in the Era of the Digital State

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Abstract— Automated decision-making (ADM) in the public sector creates a wide range of issues that require public law analysis. A precondition of such analysis is the existential question of whether mechanisms for enforcing public law norms will continue to be effective in the era of the digital state. This article considers one institutional manifestation of that fundamental question: how public law errors in ADM systems are evidenced in judicial review proceedings. Our analysis of the nature of proving error in ADM systems reveals that this emergent mode of administration will likely have a range of impacts on contemporary judicial review evidence practices—we identify seven potential effects. This exploration also exposes how current scholarship is operating on a deficient account of the role of evidence in public law adjudication. In this sense, our thesis reveals how advancements in digital government expose the frailties and limitations of our existing understanding of public law.

I. Introduction

It may be thought that the increasing use of automation in public administration contains the seeds of two distinct futures. One future is a more efficient, responsive, and joined-up state, where arrangements for the pursuit of the public interest, the provision of individual entitlements, and the protection of rights are optimised. Another future is one where automation reproduces, entrenches, and perpetuates extant social problems such as discrimination and inequality—cutting further into individuals' spheres of privacy, 'innovation' risks producing an altogether less human form of government. The reality is, of course, much messier than two diverging paths. Digital administration, as with administration

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¹ Lord Sales, 'Algorithms, Artificial Intelligence and the Law' (The Sir Henry Brooke Lecture, 2019).

generally, involves complex trade-offs.² The politics and motivations that frame developments are important but so too are the more routine and technical aspects of implementation. Automated administration is rapidly becoming the complex reality in many states, including the UK, and the early evidence is raising alarms that the trade-offs being struck are problematic. In a recent report, the UN Special Rapporteur on Extreme Poverty, Professor Philip Alston, observed that, despite the 'irresistible attractions for governments' to use automated technologies, there is 'a grave risk of stumbling zombie-like into a digital welfare dystopia.'³

These developments force public lawyers into the fray. While there is a wide range of issues that require public law analysis in this context, the existential question is whether mechanisms for enforcing public law norms—norms which perform the essential function of allocating and constraining power in the state—will continue be effective in the era of the digital state. This article considers one institutional manifestation of that fundamental question: how public law errors in ADM systems are proven through evidence in judicial review proceedings. The advancement of knowledge and analysis in this ostensibly niche area goes to the core of the challenge in ensuring that public law norms maintain traction in automated systems: without a sound account, parts of ADM systems could be practically immune from judicial review due to the effective absence of an enforcement mechanism.

Our analysis of the role of evidence in ADM challenges—based on how ADM systems operate and our understanding of how evidence works in conventional judicial review cases—suggests that this new form of administrative decision-making will have a range of impacts on contemporary judicial review evidence practices. We identify seven such impacts: (1) challenges to ADM will put greater emphasis on certain types of evidence, particularly design-process evidence; (2) litigants will resort to new fact-finding techniques;

² J.L. Mashaw, *Bureaucratic Justice: Managing Social Security Disability Claims* (Yale University Press, 1983). ³ *Report of the Special rapporteur on extreme poverty and human rights* (11 October 2019, A/74/493) [77].

⁴ J. Tomlinson, Justice in the Digital State: Assessing the Next Revolution in Administrative Justice (Bristol University Press, 2019). On digital administration generally, see: O. Hood and H. Margetts, The Tools of Government in the Digital Age (Palgrave Macmillan, 2007); P. Dunleavy, H. Margetts, S. Bastow, and J. Tinkler, Digital Era Government: IT Corporations, the State, and e-Government (Oxford University Press, 2008); B.S. Noveck, Wiki Government: How Technology Can Make Government Better (Brookings Institute Press, 2009).

Such litigation is now starting to take place across the world, see *e.g.* R. Richardson, J.M. Schultz, and V.M. Southerland, *Litigating Algorithms 2019 US Report: New Challenges to Government Use of Algorithmic Decision Systems* (AI Now, 2019). See generally: M. Zalnieriute, L. Bennett Moses, and G. Williams, 'The Rule of Law and Automation of Government Decision-Making' (2019) 82(3) *Modern Law Review* 425. There is a growing international literature on automation and public law, see *e.g.* A. Le Sueur 'Robot government: automated decision-making and its implications for parliament' in A. Horne and A Le Sueur (eds), *Parliament: Legislation and Accountability* (Oxford: Hart Publishing, 2016); C. Coglianese and D. Lehr 'Regulating by robot: administrative decision making in the machine-learning era' (2017) 105 *Georgetown Law Journal* 1147; M. 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; J. Cobbe, 'Administrative Law and the Machines of Government: Judicial Review of Automated Public-Sector Decision-Making' (2019) *Legal Studies* 636; C. Harlow and R. Rawlings, 'Proceduralism and Automation: Challenges to the Values of Administrative Law' in E. Fisher, J. King, and A. Young (eds.) *The Foundations and Future of Public Law* (Oxford University Press, 2020)

(3) litigants will also be forced to rely more heavily on legal routes, provided principally in data protection law, to gain access to information about ADM systems; (4) the ability of conventional public law principles to force disclosure regarding the operation of ADM systems will be tested; (5) there will be increased reliance on experts (*e.g.* data and computer science experts) along with the democratisation of basic technical knowledge within the public law professional community; (6) the definition of the burden and standard of proof relevant to ADM systems will require further elaboration, and there are good arguments that a tailored approach ought to be developed in this context; and (7) some elements of judicial review procedure are, without amendment or flexible application, unlikely to be practically viable in an ADM context, meaning the case for an overarching procedural review will grow.

These conclusions, and our exploration of the role of evidence in the context of ADM challenges more generally, also serve to reveal how public law thought is presently operating on a deficient account of the role of evidence. The conventional account of evidence in judicial review, found in both academic literature and practitioner texts, is no longer credible. The need to respond to ADM thus stands as a prime example of why there is a demand—much like that long-recognised by those concerned with criminal law and other areas of significant litigation activity—to develop a general field pertaining to the law, practice, and principles of evidence in judicial review. In this sense, our analysis shows how advancements in digital government are continuing to expose the frailties and limitations of our existing understanding of public law.

The discussion in this article is presented in three parts. The first part explains why ADM systems present particular difficulties in terms of proving public law errors, differentiating the types of opacity seen in such systems. The second part examines the current understanding of the role of evidence in judicial review and finds it to be in an unsatisfactory condition, disconnected from the realities of litigation and adjudication. The final part of the article identifies seven key impacts of ADM on contemporary judicial review evidence practices.

It is important at the outset to explain the important role of judicial review in the wider context of 'algorithmic regulation.' Much of the current debate on the use of ADM, both in the public sector and elsewhere, focuses on designing fair ADM processes and not on litigation or other redress systems. This is entirely appropriate. Litigation, despite its virtues, is a last resort and has many well-known limitations. Judicial review is, generally, not configured to be a general policymaking process but to adjudicate disputes. Courts are best avoided by getting administrative designs and decisions right—or at least lawful—first time.

⁶ K. Yeung and M. Lodge (eds.), *Algorithmic Regulation* (Oxford University Press, 2019).

⁷ See, for instance, the approach of the prominent 'FAT-ML' (Fairness, Accountability, and Transparency in Machine Learning) community: https://www.fatml.org/ (accessed 21 October 2019).

⁸ A. Lahav, *In Praise of Litigation* (Oxford University Press, 2017); J. King, *Judging Social Rights* (Cambridge University Press, 2012), Ch. 3.

⁹ F. Schauer and R.J. Zeckhauser, 'The Trouble with Cases' in D. Kessler (ed.), *Litigation versus Regulation* (University of Chicago Press, 2011).

However, the relationship between judicial review and ADM remains of critical importance, not least because judicial review is a key guardrail of legality and it will no doubt be the case that things will go wrong from time to time, particularly during a time of governmental innovation. Effective judicial review is no magic bullet for the problems that ADM generates but it will be an essential element of the effective regulation of new technologies in the public sector.

II. THE PROBLEM OF EVIDENCE IN JUDICIAL REVIEW OF AUTOMATED DECISION-MAKING

Why is judicial review evidence in the context of ADM specifically worthy of attention from public lawyers? The answer to this question lies in the particular difficulty with evidencing public law errors in ADM systems, which typically are more opaque than traditional administrative decision-making processes. In a traditional administrative decision-making process, an official applies their mind to the facts and the relevant law to reach a decision.¹⁰ They often record their reasons for their decision in the form of a written record or a decision letter. In an ADM system, data input to a system (perhaps by an official, an applicant, or extracted from existing databases) is considered by an algorithm, which then automatically produces an output that will either immediately make a decision, or can be used to assist the decision-making of a public official. The official's mind and reasoning, which are significant evidence bases for a traditional public law decision, are effectively replaced by an algorithm where a decision is fully automated. Even where an official has discretion to override, or ignore, the output of an ADM system, its logic may still be influential on the decision—for instance, humans have repeatedly been shown to be biased towards computerised outputs." It is entirely possible that using ADM for administrative decision-making may, in some contexts, represent progress in making official reasoning more transparent and accessible—after all, it is potentially possible to examine an algorithm whereas it is essentially impossible to peer inside the minds of human officials. However, the nature of opacity is, in various important ways, distinct and more complex in ADM systems, particularly in light of how such opacity interacts with existing public law procedures and evidential requirements designed for a non-digital world.

There are three primary reasons why ADM systems can be opaque.¹² The first is *intentional opacity*, where the system's workings are deliberately concealed to protect its

¹⁰ In recent decades, there has been a growing theoretical and empirical evidence base on how official decision-making works, see *e.g.* M. Lipsky, *Street Level Bureaucracy: Dilemmas of the Individual in Public Services* (Russell Sage, 1980); B. Zacka, *When the State Meets Street* (Harvard University Press, 2017).

¹¹ M.T. Dzindolet, S.A. Peterson, R.A. Pomranky, L.G. Pierce, and H.P. Beck, 'The role of trust in automation reliance' (2003) 58(6) *International Journal of Human-Computer Studies* 697.

¹² J. Burrell, 'How the machine "thinks": understanding opacity in machine learning algorithms' (2016) 3(1) *Big Data & Society 1.* See also: L. Edwards. and M. Veale, 'Slave to the Algorithm? Why a 'Right to an Explanation' Is Probably Not the Remedy You Are Looking For' (2017) 16 *Duke Law & Technology Review* 18.

contents. In some contexts, this may be to keep a competitive commercial advantage ¹³ (private companies are also often used by government for technology solutions) ¹⁴ but it may also be to stop an algorithm being "gamed" by users of a system. ¹⁵ The second reason is *illiterate opacity*, where a system is only understandable to those with the particular technical ability to read and write code. There are a range of code languages and writing code requires special exactness and skill. Reading code remains a skill held by few people. This means that understanding algorithms for the purposes of legal analysis and litigation will often involve a process of technical translation between professional communities with different specialisms. The third reason is *intrinsic opacity*, *i.e.* where a system's complex decision-making process itself is difficult for any human to understand. This difficultly can often extend to people who are working 'inside' the system and situations where a public decision-maker retains the discretion to override or ignore the output of an ADM system. ¹⁶ More than one type of the three types of opacity can be present in the same system.

The upshot of opacity is that an ADM system may be difficult to understand and potentially impossible to evaluate, even for experienced systems designers with full access to a system. With full access to the inner workings of systems being rare in practice, the primary way of understanding types of opacity in automated systems is through identifying what can be understood by external observers about their operation, *e.g.* those in the position of citizens subject to an automated decision. Nick Diakopoulos has proposed a starting point in this respect by reference to two idealised 'black-box' scenarios (*i.e.* where the algorithm is not known), where each scenario 'represents an extreme on a spectrum of observability of inputs and outputs to the algorithm.' The first scenario (*Figure 1*) is where it is possible to fully observe all of an algorithm's inputs and outputs. The second scenario (*Figure 2*) presents a situation where only outputs are accessible. Imagining a spectrum between these scenarios is a useful tool to differentiate types of opacity.

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¹³ F. Pasquale, *Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press, 2016).

[&]quot;For a recent report on contracting-out in this context, see: C. Black and D. Safak, *Government Data Systems: The Bureau Investigates* (London: 2019).

¹⁵ C. Sandvig, K. Hamilton, K. Karahalios and C. Langbort, 'Auditing Algorithms: Research Methods for Detecting Discrimination on Internet Platforms' (*Data and Discrimination: Converting Critical Concerns into Productive Inquiry Conference*, May 22 2014).

¹⁶ Including both those inside and outside of the decision-making loop, see: C. Coletta and R. Kitchin, 'Algorithmic governance: Regulating the 'heartbeat' of a city using the Internet of Things' (2017) 4 *Big Data and Society* 1.

¹⁷ N. Diakopoulos, 'Algorithmic Accountability: Journalistic Investigation of Computational Power Structures' (2015) 3(3) *Digital Journalism* 398.

Figure 1: Input and output observable



Figure 2: Only output observable



It is important to remember that these models are ideal types and questions of extent naturally arise when they are considered in an applied context. In respect of the extent of what is observable about inputs and outputs of any particular ADM system, there are a few key possibilities: systems where all inputs and outputs are known; systems which are entirely opaque; systems where inputs are known, but not outputs; and systems where some amount of input is known along with some amount of output. The extent of observable data which can be understood and analysed ultimately determines the extent to which—and the ease with which—an evidence base can be established for a judicial review challenge.

Some examples are useful to demonstrate these issues of opacity. Under the EU Settlement Scheme—a scheme established to allow EU citizens to remain resident in the UK after Brexit—applicants must first verify their identity via the EU Exit: ID Document Check app. This includes their name, contact details, an identity document (a passport for EU citizens or a biometric ID card for non-EU citizen family members), and passport-style photograph of their face, for the purposes of verification. After this, they must log into a GOV.UK website in order to complete their application. Automated checks are then undertaken by sending three fields of data (the applicant's name, date of birth and national insurance number) to the DWP and HMRC, where they are checked using a 'Citizen Matching Layer' to trawl existing databases for relevant information. The data picked up is then fed back to the Home Office, where their 'business logic' (i.e. algorithm) is used to analyse the matched information, with the more specific purpose of aiming to establish a continuous period of residence in the UK. Having completed the application, and once the automated checks are finished, the applicant is then presented with one of the following decisions: pass, partial pass, or fail. Where the applicant does not receive an immediate pass, further evidence will be required on their part, to be provided to a human caseworker. While a list of suitable evidence is available online, the automated checks themselves are not retained by the Home Office, meaning that they cannot be audited in order to discern how the decision was made. The burden therefore falls on the applicant to provide further evidence, despite them being provided with no information regarding the specific output of either the 'Citizen Matching Layer' used by the DWP and HMRC, or the Home Office's 'business logic algorithm.' Therefore, although an applicant will have knowledge of what will be assessed for the purposes of a decision from the EU Settlement Scheme, determining how their own decision has been made will be much more difficult.

Another example can be seen in how ADM systems are being used across England and Wales to help support the provision of public services by local authorities. Investigative research undertaken by the Data Justice Lab in 2018, covered six such case studies, and found that there were 'no standard practices or common approaches with regards to how data is or should be shared and used by local authorities and partner agencies." This was confirmed by further research identifying the use of predictive analytics by 53 councils in England and Wales, again without common implementation practices beyond the aim of developing a 'golden view' of citizens (referring to a greater volume of data, with greater granularity of detail). These systems can be used for a range of purposes, including identifying fraudulent use of local services (e.g. incorrectly availing of school places and local transport benefits, while not living in a designated local area),20 identifying vulnerable children and families in need of support²¹, monitoring public health,²² and predictive policing for the purposes of resource allocation.²³ None of these systems rely on claimant involvement at the input stage. The first point at which an individual will come into direct contact with such a system will be following the output stage, at which time they are likely to be given little insight into the actual decision-making process used.

A further example can be found in the criminal justice context, where the Gangs Matrix of the Metropolitan Police Service is used to 'supplement enforcement and diversion action against street-focused violence' through the maintenance of a police intelligent database that identifies and shares data about individuals believed to be members of gangs, associated with gang activity, or victims of gang violence. Individuals included on the Gangs Matrix are categorised as red, amber or green, with the intent of reflecting the 'extent to which that individual poses as risk to others, and not the extent to which the individual is

¹⁸ L. Dencik, A. Hintz, J. Redden, and H. Warne, *Data Scores as Governance: Investigating uses of citizen scoring in public services* (Data Justice Lab, 2018), p.3.

¹⁹ Ibid, p.11.

²⁰ Ibid, p.12.

²¹ Ibid, p.3.

²² Ibid, p.37.

²³ Ibid, p.74.

²⁴ Mayor's Office for Policing and Crime, *Review of the Metropolitan Police Service Gangs Matrix* (December 2018).

²⁵ Amnesty International, *Trapped in the matrix: Secrecy, stigma, and bias in the Met's gang's database* (2018); Information Commissioner, 'Enforcement notice addressed to The Commissioner of the Police of the Metropolis' (November 2018).

judged to be at risk.'²⁶ Their category is determined through the combination of a scored report of their data on the Crime Report Information System (CRIS),²⁷ appearances on the Criminal Intelligence database (CRIMINT),²⁸ and the risk assessments of any partner organisations (*e.g.* the Youth Offending Service). The Gangs Matrix is primarily used to identify potential gang members, meaning that in practice it is mainly used to inform police decisions about where and how to use powers of intervention, including stop and search. This information is also shared with third parties, including local councils (where a data sharing agreement is in place).²⁹ At no point is the individual assessed involved in the input process, nor are they informed about the tool unless they become aware of its use while experiencing its, potentially very intrusive, effects.

Before we turn to consider the impacts of the opacity of ADM systems such as these on judicial review evidence, we must first consider how evidence in judicial review claims is currently understood. This, as will become clear, is not straightforward.

III. EVIDENCE IN JUDICIAL REVIEW

In stark contrast to the famous tale and continued widespread use of the Brandeis Brief in U.S. constitutional law,³⁰ those concerned with public law in England and Wales have often left the evidence-assessing functions of judges in judicial review proceedings to lie in the legal subconscious.³¹ Public law evidence is barely discussed in key textbooks and not taught in law schools. In the Administrative Court's *Judicial Review Guide*, there is scant reference to the handling of evidence.³² This gives the impression that evidence is merely peripheral in

Metropolitan Police Service, 'Data Protection Impact Assessment relating to MPS Gang Violence Matrix' (2020), p.8

²⁶ Mayor's Office for Policing and Crime, *Review of the Metropolitan Police Service Gangs Matrix* (December 2018), p.20.

This is scored on the basis of the seriousness of the offence, time elapsed since the offence occurred, and whether the individual was suspected or charged (no conviction required), see ibid, p.20

²⁸ Ibid, p.101.

Muller v. Oregon (1908) 208 U.S. 412. For conflicting accounts of origins which all agree on the significance of this device, see: J. Horwitz, *The Transformation of American Law, 1870-1960: The Crisis of Legal Orthodoxy* (Oxford University Press, New York 1992), p.209; D.E. Bernstein, 'Brandeis Brief Myths' (2011) 15 Green Bag 2D 9; N. Morag-Levine, 'Facts, Formalism, and the Brandeis Brief: The Origins of a Myth' (2013) 1 University of Illinois Law Review 59.

There are some notable exceptions, see *e.g.* P. Yowell, *Constitutional Rights and Constitutional Design: Moral and Empirical Reasoning in Judicial Review* (Bloomsbury Hart, Oxford 2018); P. Yowell, 'Empirical Research in Rights-Based Judicial Review of Legislation' in PM Huber and K Ziegler (eds), *Current Problems in the Protection of Human Rights: Perspectives from Germany and the UK* (Hart Publishing, Oxford 2013). Perhaps the most advanced work on this topic in the UK context is Liz Fisher's work on environmental law and administration, see *e.g.* E. Fisher, P. Pascual, and W. Wagner, 'Understanding Environmental Models in Their Legal and Regulatory Context' (2010) 22 *Journal of Environmental Law* 251; E. Fisher, P. Pascual, and W. Wagner, 'Rethinking Judicial Review of Expert Agencies' (2015) 93 *Texas Law Review* 1681. There are also some famous historical contributions to this topic, most notably: K.C. Davis, 'An Approach to Problems of Evidence in the Administrative Process' (1942) 55 *Harvard Law Review* 364. Other jurisdictions, notably the U.S., have had fuller debates on this topic, for an overview D.L. Faigman, *Constitutional Fictions: A Unified Theory of Constitutional Facts* (Oxford University Press, Oxford 2008).

³² Administrative Court, *Judicial Review Guide 2019* (HM Courts and Tribunals Service, London 2019).

judicial review litigation. Our view is that evidence ought to be seen as an important aspect of contemporary judicial review litigation—it is both a part of the procedure but airing and assessing evidence is also itself an increasingly important objective of judicial review. However, this leaves us in the unhelpful position of being without a sophisticated and empirically accurate account of evidence in contemporary judicial review to approach issues of ADM with, and therefore needing to redraw the contours of the conventional account to be more in line with the prevailing practices as we understand them. In this section, we therefore explore the foundational questions of why evidence is required in judicial review and why it is significant. We also set out the current understanding of the basic structure of evidence law and practice in judicial review, where the prevailing account seems to be misleading, and why it is necessary to develop a body of knowledge around this issue generally. The primary purpose of this discussion is to lay the groundwork for a discussion of evidence in judicial review of ADM, which forms the third part of this article. At the same time, however, we show there is a need for general, systematic attention to the law and practice of evidence as it relates to judicial review.

Why is evidence required in judicial review?

The logical starting point for considering the role of evidence in judicial review is to ask why evidence is needed in the first place. The answer is simple: this need for evidence derives from the nature of the principles to be applied. Although judicial review is not routinely used to determine factual issues, many breaches of public law principles are shown by factual evidence. The principle of proportionality is an example of this. It is a 'generic' principle of public law in many jurisdictions.³⁴ In the UK it has a variety of (contested) definitions, but it broadly asks the following questions: whether a measure's objective is sufficiently important to justify the limitation of a fundamental right; whether a measure is rationally connected to the objective; whether a less intrusive measure could have been used; and whether, having regard to previous issues and to the severity of the consequences, a fair balance has been struck between the rights of the individual and the interests of the community.³⁶ It is clear, as Anne Carter has observed, that 'judicial assessments of proportionality often depend upon complex empirical questions that are difficult to determine with any certainty.'³⁷ Mattias Kumm has explained how both the suitability and

The obvious reference point is the law of criminal evidence but other fields have demonstrated wide interest in this dimension of legal practice and adjudication, see *e.g.* P. Alston and S. Knuckey (eds), *The Transformation of Human Rights Fact-Finding* (Oxford University Press, Oxford 2015); P. Leach, C. Paraskeva & G. Uzelac, 'Human Rights Fact-finding – the European Court of Human Rights at a Crossroads' (2010) 28(1) *Netherlands Quarterly of Human Rights*; J.G. Devaney, *Fact-finding before the International Court of Justice* (Cambridge University Press, Cambridge 2016).

³⁴ D.S. Law, 'Generic Constitutional Law' (2005) 89 Minnesota Law Review 652.

³⁵ For an overview, see A.C.L. Davies and J.R. Williams, 'Proportionality in English Law' in S. Ranchordás and B. de Waard (eds), *The Judge and the Proportionate Use of Discretion: A Comparative Study* (Routledge, 2016).

³⁶ Bank Mellat v Her Majesty's Treasury (No 2) [2014] AC 701, 771 [20] (Lord Sumption JSC).

⁸⁷ A. Carter, 'Constitutional Convergence? Some Lessons from Proportionality' in M. Elliott, J.N.E. Varuhas, S. Wilson Stark, *The Unity of Public Law* (Hart Bloomsbury, Oxford 2018).

necessity questions involve empirical claims as they 'express the requirement that principles be realised to the greatest possible extent relative to what is factually possible.' Similarly, Aharon Barak has observed that: '[i]n order to properly answer the question of whether the alternative means - which limit the right to a lesser extent - equally advance the purpose as the means chosen by the legislator, an understanding of both the purpose and the probability of its being achieved through the alternative means is necessary. An estimate is insufficient; the understanding should be of the concrete factual data, as well as of the probabilities and risks involved.' Many others have made similar points. The courts have also recognised the empirical aspect of their role under the proportionality principle. For instance, in *Wilson v First County Trust Ltd* it was said by Lord Hobhouse that:

The questions of justification and proportionality involve a sociological assessment-an assessment of what are the needs of society. This in part involves a legal examination of the content and legal effect of the relevant provision. But it also involves consideration of what is the mischief, social evil, danger *etc* which it is designed to deal with. Often these matters may already be within the knowledge of the court. But equally there will almost always be other evidentially valuable material which can be placed before the court which is relevant, such as reports that have been made, statistics that have been collected, and so on. Oral witnesses may have important evidence too.⁴¹

Though it has received some occasional academic consideration, the question of how facts are established under proportionality analysis has not widely been wrestled with in the UK.⁴²

The need for evidence cannot be avoided by attributing these issues to the particular principle of proportionality either. The traditional *Wednesbury* standard, 43 which is often contrasted with proportionality for being a more deferential test, is also fact-intensive. 44 It asks, on Lord Diplock's famous formulation, whether a measure is so 'outrageous in its defiance of logic or accepted moral standards that no sensible person who had applied his mind to the question to be decided could have arrived at it. 45 The application of this test, as Paul Craig has demonstrated convincingly, still requires close consideration of the facts and

^{**} M. Kumm, 'Political Liberalism and the Structure of Rights: On the Place and Limits of the Proportionality Requirement' in G. Pavlakos (ed), *Law, Rights and Discourse: The Legal Philosophy of Robert Alexy* (Hart, Oxford 2007), p.137.

³⁰ A. Barak, *Proportionality: Constitutional Rights and Their Limitations* (Cambridge University Press, Cambridge 2012), p.321.

⁶⁰ See *e.g.* R. Alexy, *A Theory of Constitutional Rights* (Julian Rivers trans, Oxford University Press, Oxford 2002) p.67, p.399, pp.414-415.

⁴¹ [2003] UKHL 40 [142].

¹² See *e.g.* T, Endicott, 'Proportionality and Incommensurability' in G. Huscroft, B.W. Miller, and G. Webber (eds), *Proportionality and the Rule of Law: Rights, Justification, Reasoning* (Cambridge University Press, Cambridge 2014).

⁴⁸ Associated Provincial Picture Houses Ltd. v Wednesbury Corporation [1948] 1 KB 223.

[&]quot;For a general analysis of these issues, see: P. Craig, *Administrative Law* (7th edn Sweet & Maxwell, London 2012).

⁴⁵ Council of Civil Service Unions v Minister for the Civil Service [1984] UKHL 9. There has been some recent judicial discussion on the nature and formulation of this test in the Supreme Court, for an overview see J. Rylatt and J. Tomlinson, 'Something New in Substantive Review' [2016] *Judicial Review* 204.

a balancing of considerations. ⁴⁶ This has now been recognised by the Supreme Court, with Lord Mance stating in Kennedy that both 'reasonableness review and proportionality involve considerations of weight and balance, with the intensity of the scrutiny and the weight to be given to any primary decision maker's view depending on the context.' Even cases of statutory interpretation—which is what the vast majority of what judicial reviews in the UK are about and the most routine of judicial tasks⁴⁸—demand careful analysis of the facts.

The growing importance of evidence

The assessment of evidence is not only an essential part of the 'traditional grounds' of judicial review, but it has also grown in proportion with the changing role of judicial review itself. The common law grounds of judicial review have multiplied and adapted in recent decades. Legislation such as the Human Rights Act 1998 and the Equality Act 2010 routinely requires the courts to interrogate facts closely. 49 Public interest cases—i.e. cases that relate to alleged failures which go beyond an individually-relevant administrative action—also offer scope for increasingly complex evidential disputes. ⁵⁰ The evidence in the course of such claims reaches beyond the narrow circumstances of a single decision. Such dynamics have been particularly visible in recent case law concerning 'structural procedural review.' The courts clarified the legal test for structural unfairness in the landmark ruling in *Detention Action*, where Lord Dyson MR summarised the principles derived from the authorities as follows:

(i) in considering whether a system is fair, one must look at the full run of cases that go through the system; (ii) a successful challenge to a system on grounds of unfairness must show more than the possibility of aberrant decisions and unfairness in individual cases; (iii) a system will only be unlawful on grounds of unfairness if the unfairness is inherent in the system itself; (iv) the threshold of showing unfairness is a high one; (v) the core question is whether the system has the capacity to react appropriately to ensure fairness ...; and (vi) whether the irreducible minimum of fairness is respected by the system and therefore lawful is ultimately a matter for the courts. 52

It is clear on the face of such principles that a firm evidence base will be required to found a claim of this kind. Recent public interest cases, whether based on *Detention Action* principles or other grounds, have shown the necessity of robust evidence for successful

⁴⁷ Kennedy v The Charity Commission [2014] UKSC 20 [54].

⁴⁶ P.P. Craig, 'The Nature of Reasonableness Review' (2013) Current Legal Problems 1.

⁴⁸ See the empirical analysis in S. Nason, *Reconstructing Judicial Review* (Bloomsbury Hart, Oxford 2016).

On the Human Rights Act, see e.g. Sir J. Bowman, Review of the Crown Office List (London, 2000), Ch. 5 [8]; J. Bracken, 'The impact of the Human Rights Act 1998 on evidence and disclosure in judicial review proceedings' (2001) 36 Amicus Curiae 27.

³⁰ For an analysis which considers the changing nature of judicial review, including the nature of public interest cases, see: R. Rawlings, 'Modelling Judicial Review' (2008) 61(1) Current Legal Problems 95.

⁵¹ This is a 'means of challenging legal or administrative regimes that are inherently unfair... [it] investigates the rules that govern administrative decision-making, as opposed to the actions or intent of the people tasked with enacting them,' see F. Powell, 'Structural Procedural Review: An Emerging Trend in Public Law' [2017] Judicial Review 83.

² The Lord Chancellor v Detention Action [2015] EWCA Civ 840 [27]. This test has since been endorsed by the Court of Appeal in IS v Director of Legal Aid Casework [2016] EWCA Civ 464 [16].

systemic challenges.⁵³ As Adams-Prassl and Adams-Prassl have put it, '[c]ombined with the high threshold required to succeed in systemic access to justice litigation, these evidential and empirical requirements appear to pose formidable challenges for claimants.⁵⁴

The Supreme Court's judgment in *UNISON* is an example of this. ⁵⁵ That case ruled that a particular fee for accessing employment tribunals was unlawful. Quantitative data on the effects of the fee was used in the litigation and was a key part of the ultimate decision.⁵⁶ UNISON also saw use of hypothetical evidence. When UNISON was in the Divisional Court, the orthodox position was maintained: evidence 'could not be provided by reference only to the cases of notional individuals... Unison should have adduced evidence of actual potential claimants who are said to have been unable to afford to pay the fees." Yet this position fell away in the Court of Appeal and Supreme Court, where it was held that there is 'no reason in principle why well-constructed cases of notional individuals could not be used to assist in proving that the fees would be realistically unaffordable for at least some typical claimants.⁵⁸ Evidence was of similar importance in *RF*, a successful Administrative Court challenge to welfare decision-making.⁵⁹ In that case, the evidence of the Department for Work and Pensions, a regression analysis used to justify a policy, was under scrutiny. In response to that the Department's feeble testing of the policy, Mostyn J ruled that if 'a distinction with such a dramatic effect [as that in the policy] is to be drawn then elementary fairness surely requires that empirical research be commissioned. In the absence of any empirical research the view is no more than a subjective opinion or hypothesis. '60

The judiciary have recognised the importance of evidence in judicial review, as described here, but are maintaining two lines on the relationship between judicial review and evidence, which may appear to be in tension. On the one hand, judicial review judgments in the UK are littered with claims of the centrality of facts and context: 'context is everything.' Such claims may seem comfortable next to similarly common claims that '[t]he

⁵⁵ R (UNISON) v Lord Chancellor [2017] UKSC 51. For context and analysis, see: M. Ford, 'Employment Tribunal Fees and the Rule of Law: R (Unison) v Lord Chancellor in the Supreme Court' (2018) 47(1) Industrial Law Journal 1.

⁶¹ E. Fisher, P. Pascual, and W. Wagner, 'Understanding Environmental Models in Their Legal and Regulatory Context' (2010) 22 *Journal of Environmental Law* 251, observing in the environmental judicial review context that 'while judges have tended to stress their lack of competence and the importance of deference to expert discretion, they have tended to consider arguments about models and modelling at length.'

⁵³ See generally, A. Adams-Prassl and J. Adams-Prassl, 'Systemic Unfairness, Access to Justice, and Futility: A Framework' (2020) 40 *Oxford Journal of Legal Studies* (forthcoming).

⁵⁴ Ibid.

This evidence was also presented and analysed in A. Adams and J. Prassl, 'Vexatious Claims: Challenging the Case for Employment Tribunal Fees' 80(3) *Modern Law Review* 412. Equally, in failed claims on similar grounds the evidential weaknesses have been significant, see *e.g. R (Leighton) v The Lord Chancellor* [2020] EWHC 336 (Admin).

⁵⁷ R (Unison) v Lord Chancellor [2014] EWHC 4198 (Admin) [60-62] (Elias LJ), [96-98] (Foskett J).

⁸⁸ R (Unison) v Lord Chancellor [2015] EWCA Civ 935 [69] (Underhill LJ).

³⁰ RF v Secretary of State for Work and Pensions [2017] EWHC 3375 (Admin).

⁶⁰ Ibid [47].

[®] R v Secretary of State for the Home Department, ex p Daly [2001] UKHL 26, [2001] AC 523 [28]; AXA General Insurance Ltd v HM Advocate [2011] UKSC 4 [170] (Lord Reed). See further: M, Fordham QC,

need to resolve [factual] disputes does not often arise, because of the nature of most judicial review proceedings. But, when it does arise, it does not create any particular conceptual or procedural problems.' At the same time, there are many occasions where judges, typically in an attempt to maintain a distinction between merits and legality review, claim judicial review is not well-suited to the determination of disputed questions of fact.'

Evidence is not only frequently an important part of the judicial review process but it also often has a consequential role. Following *UNISON*, access to employment tribunals has been restored to many who otherwise be unable to go to the tribunal. The Government estimated the total cost of fee refunds flowing from the ruling will amount to £33m. ⁶⁵ The Government has also been required to hire new judges to cope with revitalised demand on the tribunal. ⁶⁶ After the decision in *RF*, the government decided not to appeal and instead announced its intention to undertake a review of approximately 1.6 million benefits, with around 220,000 people expected to receive more money. ⁶⁷ Both cases turned largely on the scrutiny of detailed evidence. Such evidence assessments can claim normative and functional significance in much the same way that the general principles of judicial review, which have been widely analysed, can. Many of the classic questions at the heart of public law—who has authority to decide, how should questions be determined, standard of review *etc.*—arise *vis-à-vis* evidence assessment.

Challenging the orthodox account of evidence in judicial review

There has been no empirical study of the role of evidence in judicial review. Yet, prevailing public law orthodoxy tells us that judicial review evidence has some particular key features. Three are particularly worthy of note, as they characterise the present understanding. First, judicial review relies heavily on written evidence. The Administrative Court has an inherent power to hear oral evidence from witnesses. Yet this power is only used in occasional cases where is it necessary to ensure a claim is dealt with fairly and justly, and in practice it is exceptionally rare. All witness statements must comply with the requirements set out in

⁶⁷ J. Moore, 'The DWP are reviewing all PIP payments – we all knew this day would come, so why did it take them so long?' (*The Independent*, 8 February 2018). For a detailed assessment of the impact of this case, see: L. Vanhala and J. Kinghan, *Using the law to address unfair systems: A case study of the Personal Independence Payments legal challenge* (The Baring Foundation and Lankelly Chase, 2019).

Judicial Review Handbook (6th edn, Hart 2012), p.351 (providing an extensive survey of authorities making this claim).

⁶³ Trim v North Dorset District Council [2010] EWCA Civ 1446 [24].

⁶⁴ R(A) v Croydon London Borough Council [2009] UKSC 8 [33].

⁶⁵ D. Pyper and F. McGuinness, *Employment tribunals after R (Unison) v Lord Chancellor* (Number CBP 8296, 11 July 2018).

⁶⁶ Ibid.

⁶⁸ R. (PG) v London Borough of Ealing [2002] A.C.D. 48 [20-21] (Munby J.).

[®] R (Bancoult) v Secretary of State for Foreign and Commonwealth Affairs [2012] EWHC 2115 [14]. An example of permission being given is in R. (Jedwell) v Denbighshire CC [2015] EWCA Civ 1232. The Court of Appeal has since reaffirmed that this should be viewed as an exception, see: R (Talpada) v Secretary of State for the Home Department [2018] EWCA Civ 841 [2] (Hallett LJ), [54] (Underhill LJ).

Civil Procedure Rules.⁷⁰ Expert evidence is permissible only where it is reasonably required to determine relevant issues.⁷¹ When they are involved, experts owe an overriding duty to the Court and their role is to assist the Court, not any particular party.⁷² The Court also can receive evidence and submissions from any other persons in a case, *i.e.* intervenors.⁷³ Facts can be, and are commonly, agreed between parties prior to a hearing.

Second, the general starting point in judicial review is that the relevant evidence is that which was before the decision-maker and any information pertaining to the process by which that decision was made. The classic statement of the extent to which evidence other than evidence of the decision under challenge is admissible is *Powis.*⁷⁴ The categories identified in that case can be summarised as follows: evidence showing what material was before or available to the decision-maker; evidence relevant to the determination of a question of fact on which the jurisdiction of the decision-maker depended; evidence relevant to determining whether a proper procedure was followed; and evidence relied on to prove an allegation of bias or other misconduct on the part of the decision-maker. Although these categories are now well-established, they are not final nor exhaustive and the courts have been willing to go beyond them.⁷⁵

Third, it is often thought that public law litigation is of a distinct nature because, instead of the court forcing and ensuring disclosure of evidence between parties, there is typically reliance on the duty of candour. This requires that public authority defendants 'co-operate and... make candid disclosure by way of [witness statement] of the relevant facts and (so far as they are not apparent from contemporaneous documents which have been disclosed) the reasoning behind the decision challenged. In other words, the public authority defendant must provide the court with full explanations of all facts relevant to the issues that the court must decide. The underlying rationale is that the objective should not be success but ensuring legality. The duty 'endures from the beginning to the end of the proceedings." Claimants also have a duty, throughout the course of a claim, to fully disclose

⁷⁰ CPR PD 32.17-25

⁷¹ CPR 35.1 See also CPR 54.16.8 for guidance on the circumstances when expert evidence may be admissible in a claim for judicial review.

⁷² CPR 35.3

⁷³ CPR 54.17(1).

⁷¹ R v Secretary of State for the Environment, ex parte Powis [1981] 1 WLR 584, 595 (Dunn LJ).

⁷⁵ R (Lynch) v General Dental Council [2003] EWHC 2987 (Admin) (Collins J); R (Law Society) v Lord Chancellor [2018] EWHC 2094 (Admin).

⁷⁶ An overview of the key principles was set out in *R. (Hoareau) v Secretary of State for Foreign and Commonwealth Affairs* [2018] EWHC 1508 (Admin). See also: *R v Lancashire County Council, ex parte Huddleston* [1986] 2 All ER 941, p.945; *R (Al-Sweady) v Secretary of State for Defence (No 2)* [2009] EWHC 2387 (Admin).

⁷ Belize Alliance of Conservation Non-Government Organisations v Department of the Environment [2004] UKPC 6 [86].

⁷⁸ *R (Quark Fishing Ltd) v SSFCA* [2002] EWCA Civ 1409 [50].

⁷⁹ R (Bilal Mahmood) v Secretary of State for the Home Department [2014] UKUT 439 [23]. See further: Treasury Solicitor's Department, Guidance on discharging the duty of candour and disclosure in judicial review proceedings (January 2010).

all relevant facts of which they are aware and all such facts they would have known if appropriate inquiries were made.⁸⁰

Beneath this orthodox account, the contemporary reality of evidence in judicial review is a far more complex and messy—in fact, often altogether different—type of business. It is clear, on the face of judgments alone, that judicial review engages a diverse range of evidence. For example, it is increasingly common to see quantitative statistics, 2 qualitative research,83 and technical expert evidence cited in judgments.84 Policy and administrative documents are typical in judicial review cases. These can take many forms, including: strategies, reviews, reports, delivery plans, guidance, manuals, action plans, collaborative, circulars, frameworks, implementation checklists, statutory codes of practice, professional practice guidance, service standards, operation guides, minutes of inter-departmental and local government meetings, leaflets and training distributed to decision maker, and ministerial statements. Impact assessments, including equality impact assessments, are now relatively routine features of litigation—they often present a structure convenient for a public law increasingly concerned with policy aims, the impacts of government action, and the relationship between the two.85 Materials from all stages of public consultation are also common. Similarly, legislative evidence—including Draft Bills, Parliamentary briefing papers, Parliamentary Committee evidence (e.g. recommendations, evidence cited, reports), Hansard, Green and White Papers and explanatory notes—are widely cited in judgments, 87

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⁸⁰ Cocks v Thanet DC [1983] 2 AC 286, p.294G; R (Khan) v Secretary of State for the Home Department [2016] EWCA Civ 416 [35-37], [71].

⁸¹ Judgments only offer a glimpse into the evidence base of judicial review decision-making too – much of the evidence used in argument will not be represented in the text of the decision.

⁸² See e.g. R (TN (Vietnam) & US (Pakistan)) v Secretary of State for the Home Department & Anor (Rev 1) [2017] EWHC 59 (Admin); R (Sathanantham & Ors) v The Secretary of State for the Home Department & Anor [2016] EWHC 1781 (Admin); R (HA) v London Borough of Ealing [2015] EWHC 2375 (Admin).

^{**} See e.g. R (Conway) v The Secretary of State for Justice (Rev 1) [2017] EWHC 2447 (Admin).

⁸¹ See *e.g. R (JK) v The Secretary of State for the Home Department & Anor* [2015] EWHC 990 (Admin); *Speed Medical Examination Services Ltd v Secretary of State for Justice* [2015] EWHC 3585 (Admin).

⁸⁵ See e.g. R (DA & Ors) v Secretary of State for Work and Pensions [2017] EWHC 1446 (Admin); R (Hudson Contract Services Ltd) v The Secretary of State for Business, Innovation and Skills [2016] EWHC 844 (Admin).

^{**} See e.g. R (The London Criminal Courts Solicitors Association & Ors) v The Lord Chancellor (Rev 1) [2015] EWHC 295 (Admin); Public and Commercial Services Union & Ors v Minister for the Cabinet Office [2017] EWHC 1787 (Admin).

⁸⁷ See e.g. The Royal Society for the Protection of Birds Friends of the Earth Ltd & Anor v Secretary of State for Justice the Lord Chancellor [2017] EWHC 2309 (Admin); R (Justice for Health Ltd) v The Secretary of State for Health [2016] EWHC 2338 (Admin); Shindler & Anor v Chancellor of the Duchy of Lancaster & Anor [2016] EWHC 957 (Admin); Hurley & Ors v Secretary of State for Work and Pensions [2015] EWHC 3382 (Admin); R (Conway) v The Secretary of State for Justice (Rev 1) [2017] EWHC 2447 (Admin).

as are materials from other legislatures⁸⁸ and international organisations.⁸⁹ Hypothetical evidence is increasingly used too. 90

Along with the diversity of evidence, the reality of the litigation process does not strictly align with the ideal. For instance, the duty of candour appears to be under strain in recent years. Citizens UK is perhaps the most high-profile recent example. This case involved an NGO challenging, in the Court of Appeal, a decision upholding the legality of an expedited process adopted by the Secretary of State to assess the eligibility of unaccompanied asylum-seeking children to be transferred to the UK from France. Evidence disclosed to the Court of Appeal was not previously disclosed the High Court. The Court of Appeal found that the absence of the evidence in the High Court meant the judge, Soole J, was effectively misled on three material issues: whether the children were only provided with reasons set out in the spreadsheet provided to the French authorities; that the French authorities' attempt to seek more detailed reasons was refused by domestic authorities 'at least in part on the ground that this would give rise to the risk of legal challenge;' and the fact that the French government sought a review of the applications in question. Singh LJ found that this failure, though it was not necessarily in bad faith, constituted 'a serious breach of the duty of candour and co-operation." We lack systematic empirical evidence on the duty of candour and therefore it is difficult to tell how the duty is implemented in practice across the full range of cases. However, recent evidence on judicial review, particularly in the context of immigration disputes, suggests the conduct of litigation parties in judicial review is not necessarily always in the spirt of collaboration and may give rise to good reasons for questioning the wisdom of a 'self-policing' duty.⁹³

Another example of a growing gap between practice and the orthodox account is the use of expert evidence. Experts appear to be far more common in the Administrative Court than the narrowly stated legal framework around them would suggest. Equally, given the narrow scope for disclosure in judicial review,⁹⁴ claimants often have to undertake (sometimes extensive) evidence-gathering work to furnish themselves with the evidence

⁹² Ibid [168].

^{**} See e.g. R (British American Tobacco (UK) Ltd & Ors) v Secretary of State for Health [2016] EWHC 1169 (Admin).

See e.g. Dudaev & Ors v The Secretary of State for the Home Department [2015] EWHC 1641 (Admin); R (Davis & Ors) v Secretary of State for the Home Department & Ors [2015] EWHC 2092 (Admin).

See e.g. Child Soldiers International v The Secretary of State for Defence [2015] EWHC 2183 (Admin); R. (AT) v Secretary of State for the Home Department [2017] EWHC 2589 (Admin); R (Hudson Contract Services Ltd) v The Secretary of State for Business, Innovation and Skills [2016] EWHC 844 (Admin).

⁹¹ R (Citizens UK) v Secretary of State for the Home Department [2018] EWCA 1812.

⁹⁸ See generally: R. Thomas and J. Tomlinson, *Immigration Judicial Reviews: An Empirical Study* (Nuffield Foundation, 2019).

⁹⁴ The court may order pre-action disclosure in judicial review proceedings pursuant to CPR r.31.16(3), although such applications will not often be successful, see: British Union for the Abolition of Vivisection (BUAV) v Secretary of State for the Home Department [2014] EWHC 43 (Admin); [2014] A.C.D. 69 [32]-[34], [54]-[67]. See also: H. Woolf, J. Jowell, C. Donnelly, and I. Hare, de Smith's Judicial Review (8th edn Sweet & Maxwell, London 2018) [16-072]-[16-074].

necessary to make a claim. ⁹⁵ Often, this can take the form of Freedom of Information Act 2000 requests or subject access requests. ⁹⁶

The overall picture is not yet clear. What is clear, however, is that judicial review is a jurisdiction where a range of diverse evidence is used creatively, how that evidence is handled by parties and courts appears to be changing, and the use of evidence can have important consequences on outcomes. Still, we lack a developed, systematised body of knowledge on this topic and it is quite clear that there is a disjuncture between academic understanding and day-to-day practice. This needs rectification: a growing gap between theory, law, procedure, and practice should be, at the very least, a cause for reflection. This requires public lawyers to confront two challenges. The first challenge is developing an empirical understanding of contemporary practice. There are two core questions here: what evidence is being used in judicial review proceedings; and how are courts determining evidential questions in judicial review? There is a need for these questions to be answered, as far as possible, in an empirically rigorous way: much of the limited analysis of evidence handling by the courts available at present is undermined, somewhat ironically, by the fact that authors mount their critique on a thin evidence base and selective case studies.⁹⁷ The second challenge is analysing the modern law and practices in normative, and asking how they can be optimised—for litigants, for representatives, for judges, institutionally, and constitutionally. Normative scholarship addressing this issue in other jurisdictions-most notably in the U.S.—suggests there are a range of thorny issues to be explored, including the relationship between science (social and otherwise) and law, 98 the risks and rewards of courts relying on social science in public law cases, 99 the effect on research being developed within

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⁹⁵ For instance, see the extensive research underpinning the successful judicial review challenge brought by the Children's Society against the exclusion of separated and migrant children from legal aid: H. Connolly, *Cut Off from Justice: The impact of excluding separated migrant children from legal aid* (2015).

⁹⁶ For an overview of the key avenues of evidence gathering, see: H. Woolf, J. Jowell, C. Donnelly, and I. Hare, *de Smith's Judicial Review* (8th edn Sweet & Maxwell, London 2018) [16-026]–[16-035].

⁹⁷ J. Tomlinson, 'Review: Constitutional Rights and Constitutional Design: Moral and Empirical Reasoning in Judicial Review' [2020] *Public Law* 388.

⁸⁸ R. Feldman, *The Role of Science in Law* (Oxford University Press, Oxford 2009); R. Lempert, "Between Cup and Lip": Social Science Influence on Law and Policy' (1988) 10(2) *Law & Policy* 167; J. Monahan and L. Walker, 'Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law' (1986) 134(3) *University of Pennsylvania Law Review* 477; H.M. Kritzer, 'The Arts of Persuasion in Science and Law: Conflicting Norms in the Courtroom' (2009) 72(1) *Law and Contemporary Problems* 41; S. Haack, 'Irreconcilable Differences? The Troubled Marriage of Science and Law' (2009) 72 *Law and Contemporary Problems* 1; D.L. Faigman, 'To Have and Have Not: Assessing the Value of Social Science to the Law as Science and Policy' (1989) 38 *Emory Law Journal* 1005.

⁹⁹ J. Monahan and L. Walker, 'Judicial Use of Social Science Research' (1991) 15(6) Law and Human Behavior 571; D.N. Berso and D.J. Glass, 'The Not-So Weisman: The Supreme Court's Continuing Misuse of Social Science Research' (1995) 2(1) The University of Chicago Law School Roundtable 278; S. Mody, 'Brown Footnote Eleven in Historical Context: Social Science and the Supreme Court's Quest for Legitimacy' (2002) 54(4) Stanford Law Review 793; J. Margetta Morgan and D. Pullin, 'Social Science and the Courts: Challenges and Strategies for Bridging Gaps Between Law and Research' (2010) 39(7) Education Researcher 515; W.E. Doyle, 'Can Social Science Data Be Used in Judicial Decisionmaking' (1977) 6(1) Journal of Law & Education 13; B. Grunwald, 'Suboptimal Social Science and Judicial Precedent' (2013) 161 University of Pennsylvania Law Review 1409; D.M. Hashimoto, 'Science as Mythology in Constitutional Law' (1997) 76 Oregon Law Review 111.

the litigation process, 100 how 'ways of knowing' in courts relate to scientific and administrative ways of knowing, 101 what is taken as accepted factual knowledge, 102 and the standard by which courts ought to assess evidence. This article is not the place to offer full answers to such questions but our focus on ADM forces us to confront the importance of this work through its absence from existing public law thought: we are left to approach the task of understanding evidence in the digital age without a developed field of public law evidence.

IV. JUDICIAL REVIEW EVIDENCE AND AUTOMATED DECISION-MAKING SYSTEMS

With the challenges that opacity in ADM systems present more precisely conceptualised, we now turn to address directly the question of the implications of ADM: what impact will ADM systems have on evidence in judicial review? Our view is that proving public law errors in such systems presents a range of challenges which will require not only innovation by claimants but also wider reform of legal principle and procedure. Based on our analysis of how ADM systems work and how they will interact with our understanding of judicial review procedures, principles, and practices, we suggest there will be seven important effects.

First, challenges to ADM will put greater emphasis on certain types of evidence. All of the types of evidence identified above as being used in judicial review will continue to be used in the context of ADM. However, evidential emphasis will likely shift more towards documents produced in the course of designing automated systems, such as data protection impact assessments¹⁰⁴ and cross-departmental data-sharing agreements.¹⁰⁵ Digital-led systems also typically come with a need for official training manuals and digital support mechanisms. This generates a need for documentation which explains system operation in clear language and, often, step-by-step walk-throughs. Research, particularly user research, is also common in the development of digital systems.¹⁰⁶ This design process may create another stream of

¹⁰⁰ S. Haack, 'What's Wrong with Litigation-Driven Science? An Essay in Legal Epistemology' (2008) 38 *Seton Hall Law Review* 1053.

¹⁰¹ M. Lee, L. Natarajan, S. Lock, and Y. Rydin, 'Techniques of Knowing in Administration: Co-production, Models, and Conservation Law' (2018) 45(3) *Journal of Law and Society* 427; R.F. 'What Counts as Knowledge?: A Reflection on Race, Social Science, and the Law' (2010) 44 *Law and Society Review* 515.

¹⁰² K. Burns, 'Judges, 'common sense' and judicial cognition' (2016) 25(3) *Griffith Law Review* 319; J. Monahan and L. Walker, 'Social Facts: Scientific Methodology as Legal Precedent' (1988) 76(4) *California Law Review* 877.

¹⁰⁸ We are broadly assuming here, for the purposes of this analysis, that extant public law norms will be applied to ADM systems. We do not comment here on whether this is the optimum path.

¹⁰⁴ S.L. Harris, 'Data Protection Impact Assessments as Rule of Law Governance Mechanisms' (2020) 2 *Data & Policy* (online publication).

¹⁰⁵ For an example from the EU Settlement Scheme, see: *Memorandum of Understanding (Process) between HMRC (Data Directorate) and Home Office* (2019).

¹⁰⁶ J. Tomlinson, *Justice in the Digital State: Assessing the Next Revolution in Administrative Justice* (Bristol University Press, 2019), Ch. 4; A. Clarke & J. Craft, 'The Twin Faces of Public Sector Design' (2018) *Governance* (online pre-publication); A. Clarke & J. Craft, 'The Vestiges and Vanguards of Policy Design in a Digital Context' (2017) 60(4) *Canadian Public Administration* 476; L.G. Anthopoulos, P. Siozos, and I.A. Tsoukalas. 'Applying participatory design and collaboration in digital public services for discovering and redesigning e-Government services' (2007) 24(2) *Government Information Quarterly* 353.

evidence. It is likely that broadly-applicable official documents which define digital standards—such as The Digital Service Standard, which is a set of 18 design principles and standards that applies to Central Government digital projects with the aim of 'helping teams to create and run great public services that meet the Service Standard'—will also become commonly relied upon. ¹⁰⁷ Such evidence may help supply an evidence base for public law adjudication more easily than gathering primary evidence on ADM impacts, but illegality often arises in the context of effectively sham systems, where much is promised of a particular scheme but the promise is not delivered, or delivered in a seriously flawed way, in practice. In such a context, design and system-support materials are, however, only so helpful as they pertain to the stated official intention and not the reality of the system.

Second, to establish an evidence base on the operation and impact of an ADM system, litigants will have to resort to new fact-finding techniques. Journalism and communication scholars are leading the way in developing useful methods to explore algorithms and ADM systems. For instance, Sandvig et al have proposed numerous modes of algorithm audit. One example is a 'scraping audit,' where 'a researcher might issue repeated queries to a platform and observe the results. Another is a 'sock puppet audit' where 'instead of hiring actors to represent different positions on a randomized manipulation as "testers," the researchers would use computer programs to impersonate users, likely by creating false user accounts or programmatically-constructed traffic. The feasibility of these techniques is heavily dependent on context—including relevant ethical and legal frameworks litigants are operating within—and access to expertise.

Alongside new techniques of fact-finding, litigants will be forced to rely more heavily on legal routes to gain access to information. For instance, where ADM relies on personal data (which will be in most systems used in public administration to make decisions about individuals), the General Data Protection Regulation and the Data Protection Act 2018 require a variety of information to be disclosed. This includes the right for information to be provided regarding the claimant's personal data that has been collected and the purposes for doing so, 112 a right to be informed regarding the existence of solely automated decision-making, and, in certain cases, 'meaningful information about the logic involved, as well as

¹⁰⁷ This manual itself includes a directive to 'operate a reliable service' and service teams are encouraged to *e.g.* carry out quality assurance testing regularly, test the service in an environment that is as similar to 'live' as possible, and have appropriate monitoring in place, together with a proportionate, sustainable plan to respond to problems identified by monitoring.

¹⁰⁸ C. Sandvig, K. Hamilton, K. Karahalios and C. Langbort, 'Auditing Algorithms: Research Methods for Detecting Discrimination on Internet Platforms' (*Data and Discrimination: Converting Critical Concerns into Productive Inquiry Conference*, May 22 2014). See also: A. Rieke, M. Bogen, D.G. Robinson, *Public Scrutiny of Automated Decisions: Early Lessons and Emerging Methods* (2018).

¹⁰⁹ Ibid, p.12.

¹¹⁰ Ibid, p.13.

¹¹¹ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC ("GDPR").

¹¹² Ibid. Art. 13(1)

the significance and the envisaged consequences of such processing for the data subject." However, significant debate remains as to the limitations of these protections, and whether it is possible to obtain a full explanation of an ADM system that can incorporate insight on both why a specific individual decision was made in a certain way and the logic of the overall model.¹¹⁴

Fourth, the ability of conventional public law principles to force disclosure of ADM systems will be tested. There are already various circumstances where courts have begun to apply public principles to types of automated decision-making or systems which are comparable. In Ames, the claimant sought judicial review of the Legal Aid Agency's offer in respect of counsel fees for his criminal defence.¹¹⁵ The Agency had refused to disclose the 'calculator' it used to determine the level of fees offered. The High Court held that this refusal was 'untenable' and rendered the Agency's offer invalid. The calculator was found to be 'a very important part' of the decision-making process and the LAA 'plainly owe[d] a duty of transparency and clarity' in relation to it. ¹¹⁶ In Eisai, the defendant had refused to provide the claimant with a fully executable version of the model it used to assess the cost-effectiveness of the claimant's drugs. 117 The Court of Appeal held that this was a denial of procedural fairness. It rejected the defendant's claims that disclosure would undermine confidentiality or be overly costly. Richards LJ held that 'the court should in my view be very slow to allow administrative considerations of this kind to stand in the way of its release.'118 Similarly, in Savva, the Court of Appeal held that a local authority was required to publish and explain its mathematical tool for calculating personal community care budgets, as part of a common law duty to give reasons. 119 The Court recognised that the burden of giving reasons 'would not be insignificant but it is what simple fairness requires.'120 These decisions—and decisions from other jurisdictions¹²¹—demonstrate that courts are willing to adapt administrative law to protect its animating values, but the limits of such public law principles to effectively force transparency are likely to be tested much further in the context of ADM, particularly where it is deployed on a significant scale or where private companies are involved.

¹¹³ Ibid. Art. 15(1)(h)

S. Wachter, B. Mittelstadt, L. Floridi, 'Why a right to explanation of automated decision-making does not exist in the General Data Protection Regulation' (2017) 7 *International Data Privacy Law* 2; A.D. Selbst and J. Powles, 'Meaningful information and the right to explanation' (2017) 7 *International Data Privacy Law* 4; G. Malgieri and G. Comandé, 'Why a right to legibility of automated decision-making exists in the General Data Protection Regulation' (2017) 7 *International Data Privacy Law* 4; L. Edwards and M. Veale 'Slave to the algorithm? Why a "right to an explanation" is probably not the remedy you are looking for' (2017) 17 *Duke Law & Technology Review* 18.

¹¹⁵ R (Ames) v Lord Chancellor [2018] EWHC 2250 (Admin).

¹¹⁶ Ibid [75].

¹¹⁷ R (Eisai Ltd) v National Institute for Health and Clinical Excellence [2008] EWCA Civ 438.

¹¹⁸ Ibid [65]. See the further application of this ruling by the Competition Appeal Tribunal in *HCA International Limited v Competition and Markets Authority* [2014] CAT 11.

¹¹⁹ R (Savva) v Kensington and Chelsea RLBC [2010] EWCA Civ 1209.

¹²⁰ Ibid [20].

¹²¹ See e.g. Ewert v Canada [2018] 2 SCR 165; NJCM v The Netherlands C-09-550982-HA ZA 18-388.

Fifth, ADM systems could lead to an increased reliance on expert evidence, in order to translate complex technological issues to legal audiences. The relationship between expert evidence and judicial review is already a tangled one. Generally, the current position is that expert evidence should not be admitted unless the court requires it to understand relevant technical context. 122 Where it is admitted, expert evidence must comply with the rules in CPR Part 35. 123 This position seems to have evolved further recently, both with expert evidence becoming more common¹²⁴ and the legal framework being revisited.¹²⁵ In *The Law* Society, the Administrative Court reiterated the conventional starting point: '[i]t follows from the very nature of a claim for judicial review that expert evidence is seldom reasonably required in order to resolve it. That is because it is not the function of the court in deciding the claim to assess the merits of the decision of which judicial review is sought." However, the Court also suggested that one of the instances where expert evidence may be relevant is where 'it is alleged that the decision under challenge was reached by a process of reasoning which involved a serious technical error.'127 In view of the advancement of ADM, the use of expert evidence may be necessary and certainly fits within existing gateways. As part of this, it may be the case that dummy systems and other similar simulation evidence—which is helpful in explaining how complex digital systems work—will be more commonplace too. However, the basics of ADM are not beyond the grasp of today's legal professionals any more than the complexities of, for instance, environment models are.¹²⁸ For this reason, another part of the picture here is likely to be the inevitable development of public law professionals—advisors, lawyers, judges and others—becoming more widely familiar with the basics of automated systems, the risks that they present, and how to challenge them.

Sixth, the definition of the burden and standard of proof that the courts require to establish public law error in ADM systems will require further elaboration, and there are good arguments that a tailored approach ought to be developed in this context. Given that ADM systems rest on a single central logic, one critical question is whether a judicial review of such a system will require proof that the entire system is flawed. If so, this would present a much more substantial battle for claimants in an already difficulty terrain while providing administration with another strong shield. One possibility here is for the courts to adjust the standard depending on the nature and extent of the opacity in a particular system. Similarly,

¹²² *R (Lynch) v General Dental* Council [2003] EWHC 2987 (Admin), [2004] 1 All ER 159 [22-25] (Collins J). See also: *R v Haringey BC ex p. Norton* (1998) 1 CCLR 168, 180E-G; *R (Mott) v Environment Agency* [2016] EWCA Civ 564, [2016] 1 WLR 4338 at [69-75].

¹²⁸ R (British American Tobacco UK Ltd) v Secretary of State for Health [2016] EWCA Civ 1182, [2018] QB 149.

¹²⁴ Many cases now involve multiple pieces of expert evidence, see *e.g. R.* (on the application of British Academy of Songwriters, Composers and Authors) v Secretary of State for Business, Innovation and Skills [2015] EWHC 1723 (Admin).

¹²⁵ For analysis, see: D. Blundell, 'Of Evidence and Experts: Recent Developments in Fact-finding and Expert Evidence in Judicial Review' [2019] *Judicial Review* 243.

R (The Law Society) v The Lord Chancellor [2018] EWHC 2094 (Admin), [2018] 5 Costs LR 937 [36].
Ibid [39].

¹²⁸ See *e.g.* E. Fisher, P. Pascual, and W. Wagner, 'Understanding Environmental Models in Their Legal and Regulatory Context' (2010) 22 *Journal of Environmental Law* 251.

the courts could explore at which point the duty shifts to government to explain how an ADM system works. ¹²⁹ For instance, where the concerns about ADM processes are premised upon the risks posed by the algorithm then use could potentially be made of a *Tameside*-style duty to inquire (which requires that a decision-maker takes 'reasonable steps to acquaint himself with the relevant information' in order to enable him to answer the question which he has to answer). ¹³⁰ In principle, one of the benefits promised with the advancement of ADM is the ability of the decision-making system itself to gather evidence on its workings automatically and thus more efficiently. The arguments for government to take and share the advantage of its relatively easy access to such data—gained through the use of ADM—by being responsible for producing evidence carry a great deal of force.

Finally, some elements of judicial review procedure are, without amendment or flexible application, likely not to practically viable-or at least generate problems- in an ADM context. As a result, a case for a review and reform of procedure may grow. A clear example is the limitation period for a claim. An application for permission to apply for judicial review must be made promptly and in any event within three months from the date when grounds for the application first arose. ¹³¹ In an opaque system, building an evidence base in this period of time may be very difficult if not impossible. The intricacies of possible timing arguments aside, 132 it is being increasingly recognised that this is a significant barrier to judicial review of ADM.¹³³ Another example of potential procedural reform was recently raised by Lord Sales. 134 Considering the need for expert evidence and that this 'will be expensive and time consuming, in ways which feel alien in a judicial review context,' he raised the possibility of creating 'some system whereby the court can refer the code for neutral expert evaluation by [an] algorithm commission or an independently appointed expert, with a report back to inform the court." Such pressures and proposals will, without amendment to or flexible application of current procedure, likely add weight to the case for a general procedural review at some stage in the future distant future.

V. CONCLUSION

¹²⁹ A. Deeks, 'The Judicial Demand for Explainable Artificial Intelligence' (2019) 119(7) *Columbia Law Review* 1829.

¹³⁰ Secretary of State for Education and Science v Tameside MBC [1977] AC 1014, 1065 (Lord Diplock). See further: C. Knight, 'Automated Decision-making and Judicial Review' [2020] *Judicial Review* (online prepublication).

¹³¹ CPR 54.5(1). Shorter time limits are specified by CPR 54.5(5) and (6), which set out that a claim form for certain planning judicial reviews must be filed within six weeks and within 30 days for certain procurement cases.

¹²² The court may extend the time limit for the application, pursuant to CPR 3.1(2)(a)), where there is good reason to do so.

¹⁸⁸ J. Cobbe, 'Administrative Law and the Machines of Government: Judicial Review of Automated Public-Sector Decision-Making' (2019) *Legal Studies* 636, p.541: '[d]ue to the complexity of machine learning systems and the quantities of data involved in ADM, three months may not be sufficient for a prospective claimant to obtain the data and other information needed to assess a decision, nor may it be sufficient for that assessment to be effectively undertaken.'

Lord Sales, 'Algorithms, Artificial Intelligence and the Law' (The Sir Henry Brooke Lecture, 2019).
Ibid.

There is a real risk that the deployment of ADM systems within administration will, due to their opacity, create barriers to effective judicial review. This article has explored the complexity involved in the evidential aspects of such cases. Our analysis suggest that this emergent mode of administration may have a range of impacts on contemporary judicial review evidence practices. Our exploration also reveals how current scholarship is operating on a deficient account the role of evidence in public law adjudication. Our conclusion is therefore that public lawyers must move towards establishing a sub-field concerned with public law evidence that is capable of grappling with the multifaceted challenges the rapid advance of digital government presents, along with a range of other evidential issues which have gone for some time without due attention.