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Justice in Automated Administration

Joe Tomlinson*

Abstract. *Public administration has, for some time now, been undergoing a digital transformation. Part of this change is the replacement of human public officials with automated decision-making systems. Beyond its immediate social and political significance, the EU Settlement Scheme – the mechanism established to allow EU citizens to remain resident in the UK after Brexit – represents the coming of age of a new template for automated administration. Understood in its context, this template raises foundational questions about the nature of administrative justice in the emerging digital state. This template, while it has various potential advantages, is essentially half-baked, contains significant risks without sufficient safeguards, and requires revision before its suggested wider future application becomes a reality. Amendments to the template ought to be framed by reference to the precautionary principle, as this would continue to make for efficient implementation of policy while better protecting individuals in this experimental phase of automated administration.*

1. Introduction

We are surrounded by conflicting accounts of the digital transformation of government. Replacing the work of human public officials with automated systems is a key part of this transformation. This shift, from one perspective, is part of a journey to a more efficient and effective digital state. From another, it risks undermining

* Senior Lecturer in Public Law, University of York; Research Director, Public Law Project (Correspondence: joe.tomlinson@york.ac.uk). This article is based on research conducted with the Public Law Project, to which Byron Karemba, Ollie Persey, Alison Pickup, Alexandra Sinclair, Emma Marshall, Alice Welsh, Bijan Hoshi, and Katy Watts made many valuable contributions. The research was supported by an engaged and knowledgeable expert working group. They helped shape the direction of the research and I am grateful to them for providing their valuable time to support this project. Outside of the advisory group, many experts lent their insights to the benefit of the research. In particular, I am grateful to Adam Harkens, Jennifer Cobbe, Swee Leng Harris, Phil Booth, and Oliver Butler for multiple conversations on data and automation in the public sector. Elizabeth O'Loughlin, Jennifer Raso, Swati Jhaveri, Simon Halliday, and Javier Garcia Oliva provided helpful comments on a draft. Finally, I am grateful to Jack Simson Caird and Dominic Grieve QC for arranging an APPG on the Rule of Law where this work was discussed. All views and any errors are my own.

public values and dehumanising the public sector, raising concerns about basic principles of fairness and human rights. Just as the move from Weberian understandings of bureaucracy to New Public Management did,¹ and the emergence of the welfare state itself,² this continuing emergence of digital administration³ forces us to revisit some fundamental questions concerning the relationship between law, administration, and justice.⁴ General visions and predictions, however, are only so helpful. Much of what automation ultimately means for the administrative state will be determined in the detail of how it is implemented. It is through close examination of the workings of automated decision-making in specific contexts that we will be able to grasp more firmly its wider significance for justice in administration.

The UK's withdrawal from the European Union, which has proven to be a wide-reaching catalyst for deep reflection on the country's governing arrangements, is also proving to be a major catalyst in digital administration.⁵ Brexit occurred at a time when the UK government, having just about wriggled free of its unfortunate reputation for being 'ground zero' for failed government IT projects,⁶ had found a new confidence with digital technology. A mere few years after the creation of the Government Digital Service, the UK is now widely considered to be a global leader in the field.⁷ At the same time, Brexit presented various administrative challenges for which technology promised a (seemingly) more convenient solution. One such challenge was that it was expected that millions of people, from a wide variety of different backgrounds, would apply to the EU Settlement Scheme to secure their right to continue to reside in the UK after Brexit. With its renewed digital confidence and capabilities, the Home Office adopted a novel process which included online applications, partially-automated decision-making, and cross-departmental data-

¹ Christopher Pollitt, *Managerialism and the Public Services* (2nd edn, Blackwell 1993); Patrick Dunleavy and Christopher Hood, 'From old public administration to new public management' (1994) 14(3) *Public Money & Management* 9.

² Harry Street, *Justice in the Welfare State* (2nd edn, Stevens 1968).

³ See generally: Christopher Hood and H. Margetts, *The Tools of Government in the Digital Age* (Palgrave Macmillan 2007); Patrick Dunleavy, Helen Margetts, Simon Bastow, and Janke Tinkler, *Digital Era Governance: IT Corporations, the State, and e-Government* (OUP 2008); Beth Simone Noveck, *Wiki Government: How Technology Can Make Government Better* (Brookings Institute Press 2009).

⁴ For the classic mapping of the relationship between law and administration in the UK, see: Carol Harlow and Richard Rawlings, *Law and Administration* (3rd edn, CUP 2009). On the challenges of the digital state, see: Joe Tomlinson, *Justice in the Digital State: Assessing the Next Revolution in Administrative Justice* (BUP 2019).

⁵ See e.g. Martin Loughlin, 'The British Constitution: Thoughts on the Cause of the Present Discontents' (Robin Cooke Lecture, 2017). For discussion of the general impact of Brexit on administration, see: Joe Tomlinson and Liza Lovdahl-Gormsen, 'Stumbling Towards the UK's New Administrative Settlement' (2018) 20 CYELS 233.

⁶ Dunleavy *et al* (n 3) p.70. See also: House of Commons Public Administration Select Committee, *Government and IT – 'a recipe for ripoffs': Time For A New Approach* (2010-12 HC 715-I).

⁷ See e.g. Department of Economic and Social Affairs, *UN E-Government Survey 2016* (2016).

sharing arrangements.⁸ For citizens, it was, the then Home Secretary Amber Rudd MP said, meant to be 'as easy as setting up an online account at LK Bennett.'⁹ This Scheme is part of a moment when automated administrative decision-making is coming of age: no longer consigned to the 'simple' jobs in the backroom, pilots, or local trials, automated decision-making is now the pivot between the citizen and state in a critically important, politically-sensitive area of mass decision-making.¹⁰ This is part of a much wider trend that, on current the trajectory, will only accelerate in the coming years.

There are several dimensions of the Settlement Scheme which raise significant administrative justice issues worthy of attention.¹¹ While any administrative scheme gives rise to issues of fairness,¹² periods of significant political and legal transition can present acute challenges. Furthermore, the EU Settlement Scheme is being implemented at a time where there are already significant administrative justice concerns about initial decision-making by the Home Office and the functioning of associated redress mechanisms.¹³ Perhaps the most critical long-term implication, however, is that the Government is claiming that the Settlement Scheme 'sets the tone for the design and values of the new immigration system that we will implement from 2021.' The EU Settlement Scheme is therefore not worthy of study just because it is a socially, economically, and politically important administrative Scheme; it worthy of

⁸ This article refers to the general processes under the Scheme and not those applicable to individuals relying on derivative residence rights. Such applicants cannot use online applications and must request a paper application. This presents distinct challenges.

⁹ 'Rudd says online EU registration will be 'as easy as shopping at LK Bennett' (*The Guardian*, 23 April 2018).

¹⁰ The Scheme uses rule-based automation combined with official discretion. Automation in the public sector is not new, but its use has certainly been accelerating in recent years. For wider discussion and analysis on its current use in the UK, see: Algorithm Watch, *Automating Society: Taking Stock of Automated Decision-Making in the EU* (2019); Lina Dencik, Arne Hintz, Joanna Redden, and Harry Warne, *Data Scores as Governance: Investigating uses of citizen scoring in public services* (Data Justice Lab 2018); House of Commons Science and Technology Committee, *Algorithms in decision-making: Fourth Report of Session 2017-19* (HC351, 2018). Some may contest whether the system is, in fact, automated or a more basic form of 'datafication,' but I use the term 'automation' here.

¹¹ For the seminal work on, and a definition of, administrative justice, see: Jerry L. Mashaw, *Bureaucratic Justice: Managing Social Security Disability Claims* (YUP 1983). For more recent synthesis on key theories and concerns, see: Trevor Buck, Richard Kirkham, and Brian Thompson, *The Ombudsman Enterprise and Administrative Justice* (Ashgate 2011) Ch.3; Zach Richards, *Responsive Legality: The New Administrative Justice* (Routledge 2018), Ch.1.

¹² On the inevitable nature of these issues, see: Jerry L. Mashaw, 'Structuring a Dense Complexity: Accountability and the Project of Administrative Law' (2005) 5(1) *Issues in Legal Scholarship* 1; G. Teubner, 'Juridification: Concepts, Aspects, Limits, Solutions' in Gunther Teubner (ed), *Juridification of Social Spheres: A Comparative Analysis in the Areas of Labor, Corporate, Antitrust, and Social Welfare Law* (Walter de Gruyter, 1987).

¹³ For discussion of a recent high-profile episode, see: House of Commons Home Affairs Select Committee, *The Windrush Generation* (6th Report of Session 2017-19). For concerns within the specific context of Brexit, see: House of Commons Home Affairs Select Committee, *Home Office Delivery of Brexit: Immigration* (3rd Report of Session 2017-19).

study because it is a new and experimental template for digital administration which possesses potentially far-reaching implications for the future of government more broadly.

This article offers an evaluation of the Settlement Scheme, focusing on the particulars of its design.¹⁴ The central argument advanced is that the Scheme represents a new and distinct template for administration – a template which raises a series of foundational questions about the nature of justice in the emerging digital state. These issues are identified and addressed by reference to the three key elements of that template: the legislative and policy design behind the Scheme (*i.e.* the type of rule-making used); initial decision-making process; and redress systems.¹⁵ The issues raised, particularly as regards decision-making and redress, suggest that the template underpinning the Scheme may have benefits but also intensifies multiple existing concerns about the administrative justice system. In this light, the template appears essentially half-baked, contains significant risks without sufficient safeguards, and in need of revision before wider application.¹⁶ As a result of this analysis, I argue that amendments to the template ought to be framed by reference to the precautionary principle, as this would continue to make for efficient implementation of policy while better protecting individual rights in this experimental phase of automated administration. This approach, I suggest, could also be relevant to the implementation of automation in other parts of government.

The discussion is divided into four parts. Part one introduces and examines the political foundations of the Scheme, its legal basis, and its structure. This provides important context necessary to understand the Scheme, its purposes, and how it is in many ways *sui generis*, especially as regards the deliberately favourable treatment of applicants. Part two explains how initial decision-making operates, its novelty, its benefits, and the ways in which the nature of grievances *vis-à-vis* automated decisions may differ from traditional forms of decision-making. Part three assesses the approach to redress under the Scheme, and how well it fits the types of grievances liable to arise under it. From this assessment, it is evident little thought has been given to the issue of ensuring adequate ‘fit’ between potential grievances and redress. Quite apart from providing a satisfactory answer to this question, the template underpinning the Settlement Scheme reveals a situation where politics is nakedly dictating redress

¹⁴ For elaboration on the importance of design choices in automated systems, particularly from a Rule of Law perspective, see: Monika Zalnieriute, Lyria Bennett Moses, and George Williams, ‘The Rule of Law and Automation of Government Decision-Making’ (2019) 82 MLR 425.

¹⁵ The support and advice landscape is excluded from this analysis. It also is recognised that there may be other valuable approaches to analysing administrative justice processes, but the framework adopted here permits consideration of key components.

¹⁶ For the avoidance of doubt, I do not attempt to undertake a legality analysis of the arrangements under the Scheme, or their impacts, in the course of this article.

design. Part four concludes the article, arguing that our continuing debate on automated administrative systems ought to be framed—at least for now—by reference to the precautionary principle.

2. Legislative Design

A. Context

It is thought there are close to 4 million citizens of other EU Member States enjoying rights of residence in the UK on the basis of the free movement rules.¹⁷ The removal of free movement is seen as key plank of the UK's Brexit policy. As proclaimed in the Preamble of the key piece of legislation making provision for the post-Brexit immigration system, the Immigration and Social Security Co-ordination Bill, the central policy objective is to '[e]nd rights to free movement of persons under retained EU law and to repeal other retained EU law relating to immigration.'¹⁸ Facilitating this change is not simple. Over the course of the UK's participation in the free movement framework, a substantial number of EU citizens and their families have come to call the United Kingdom home, integrating into communities around the country. To quantify this more precisely, between 2004 and 2017, the foreign-born population in the UK nearly doubled from 5.3 million to around 9.4 million.¹⁹ A substantial portion of that total number are EU citizens who have settled in the UK under free movement rules. By 2017, there were an estimated 3,438,000 non-Irish EU citizens living in the UK.²⁰ In addition, there were 131,000 non-EU partners of EU citizens (including those from Ireland). The vast majority of these residents are likely eligible to make applications to the EU Settlement Scheme.

The obvious and pressing need for certainty and clarity on the immigration status of EU citizens resident in the UK—and UK citizens resident in the EU—is why the general area of citizens' rights was considered a priority for both the UK and the EU when negotiations under Article 50 of the Treaty on European Union first started.²¹ The first substantive policy document published by the UK Government after the referendum sought to highlight its intentions on the position of EU27 nationals living

¹⁷ The varying estimates range between 3.5 million and 4 million, see: Migration Advisory Committee, *EEA Migration in the UK: Final Report* (2018); Madeleine Sumption and Zovanga Kone, *Unsettled Status? Which EU Citizens are at Risk of Failing to Secure their Rights after Brexit?* (The Migration Observatory 2018).

¹⁸ Immigration and Social Security Co-ordination (EU Withdrawal) Bill (HC 309).

¹⁹ Cinzia Rienzo and Carlos Vargas-Silva, *Migrants in the UK: An Overview* (Oxford Migration Observatory 2018).

²⁰ This figure excludes residents of communal establishments (e.g. hostels).

²¹ HM Government, *Rights of EU Citizens in the UK* (June 2017).

in the UK, and British nationals living in other EU Member States.²² Similarly, a position paper transmitted to the UK by the European Commission in 2017 emphasised ‘the essential principles on citizens’ rights’ and the importance of securing ‘the same level of protection as set out in Union law at the date of withdrawal of EU27 citizens in the UK and of UK nationals in EU27.’²³

Initial signals of good intent were crystallised in the earliest version of then Prime Minister Theresa May’s Draft Withdrawal Agreement between the UK and the EU, published in March 2018. In that early draft of the Agreement, the chapter dealing with *Citizens’ Rights* was one of the areas marked out as being ‘agreed at negotiator level and [would] only be subject to technical revision.’²⁴ This included an obligation for host Member States (including the UK) to ‘allow’ applications for a residence status which would maintain the rights enjoyed by EU citizens across the Union during a proposed transition period.²⁵ This discretion found expression in both the first Withdrawal Agreement and the final Withdrawal Agreement.²⁶ The EU Settlement Scheme—commonly referred to as the Settled Status scheme—is the administrative realisation of this commitment. Despite domestic political machinations since the creation of the Scheme, the core of the plan for EU citizens has remained the same.²⁷

B. Form

The first key question for the delivery of any administrative scheme is what Paul Craig describes as its ‘legislative design.’²⁸ Taken broadly, this provides the scope and structure of a scheme, and is usually set out in the relevant primary legislation,

²² HM, *The United Kingdom’s Exit from the European Union: Safeguarding the Position of EU Citizens Living in the UK and UK Nationals Living in the EU* (June 2016, Cm 9464).

²³ European Commission Task Force for the Preparation and Conduct of the Negotiations with the United Kingdom Under Article 50, *Position Paper on “Essential Principles on Citizens’ Rights”* (TF50 (2017) 1/2 Commission to UK, 12 June 2017).

²⁴ European Commission, *Draft Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community* (Version highlighting the progress made in the negotiation round with the UK of 16-19 March 2018).

²⁵ *Ibid*, Article 17(a).

²⁶ Department for Exiting the European Union, *Agreement on the Withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the Atomic Energy Community, as endorsed by Leaders at a Special Meeting of the European Council on 25 November 2018* (2018); *Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community* (2019/C 384 I/01).

²⁷ HM Government, *Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community* (2019).

²⁸ Paul Craig, *UK, EU and Global Administrative Law: Foundations and Challenges* (CUP 2015). ‘Legislative design’ is typically not sufficiently integrated into administrative justice analysis but is often the seed of successes and problems. See further: Edward L. Rubin, ‘Statutory Design as Policy Analysis’ (2018) 55(1) *Harvard Journal on Legislation* 143.

delegated legislation, and soft law.²⁹ In the case of the EU Settlement Scheme, the basis of the scheme has been provided for through additional appendices to the Immigration Rules.³⁰ From the perspective of established practice, the use of the Immigration Rules in this context is not surprising. In fact, legislative design is the least surprising aspect of the template underpinning the Scheme. The Rules have been the preferred mode of regulation, despite possessing various limitations, for successive governments since the Immigration Act 1971 came into force.³¹ Furthermore, from the perspective of the broader context of the political circumstances of the UK's withdrawal from the EU, the grounding of the EU Settlement Scheme in the Immigration Rules can also be understood as part of the transition of the regulation of EEA migration into the general framework of UK immigration law.

Using the Immigration Rules as the legislative basis for the Scheme nevertheless remains controversial. Three prominent objections can be identified. First, the Rules do not provide for adequate Parliamentary scrutiny either at first instance when they are made, or subsequently when they are amended through the statement of changes mechanism enabled by the same 1971 Act.³² The Immigration Rules are drafted by the Home Office and the default position is that they are scrutinised by Parliament in a manner analogous to statutory instruments laid before Parliament under the negative resolution procedure – a process about which there has been long-standing concerns.³³ Second, there is also the concern that the Rules lack the status and authority of primary legislation. It has been argued by some that the use of the Rules is unsatisfactory given that the EU Settlement Scheme implements a commitment in an international treaty which will only be ratified after approval by

²⁹ Much law is of course delegated legislation or produced in 'soft' form, see generally: Ruth Fox and Joel Blackwell, *Devil is in the Detail: Parliament and Delegated Legislation* (Hansard Society 2014); Richard Rawlings, 'Soft Law Never Dies' in David Feldman and Mark Elliott (eds), *The Cambridge Companion to Public Law* (CUP 2015).

³⁰ Immigration Rules Appendix EU: Citizens and Family Members and Immigration Rules Appendix AR (EU).

³¹ For a recent comprehensive overview, see: The Law Commission, *Simplification of the Immigration Rules: Consultation Paper* (Consultation Paper 242, 2019).

³² Section 3(2), Immigration Act 1971.

³³ There is critical analysis on the use and scrutiny of statutory instruments, which spans the history of the modern administrative state in the UK, see: Blackwell and Fox (n 30); Edward C. Page, *Governing by Numbers: Delegated Legislation and Everyday Policy Making* (Hart 2001); Aadam Tucker, 'Parliamentary Scrutiny of Delegated Legislation' in Alexander Horne and Gavin Drewry (eds), *Parliament and the Law* (Hart 2018). Note, however, there is a debate about whether the rules are strictly delegated legislation, see: *Odelola v Secretary of State for the Home Department* [2009] UKHL 25, [2009] 1 WLR 1230; *R v Chief Immigration Officer, Heathrow Airport* [1976] 1 WLR 979, [1976] 3 All ER 843; *R v Secretary of State for Home Affairs* [1977] 1 WLR 766, [1977] 3 All ER 452; *R (Munir) v Secretary of State for the Home Department* [2012] UKSC 32, [2012] 1 WLR; *R (Alvi) v Secretary of State for the Home Department* [2012] UKSC 33, [2012] 1 WLR 2208.

Parliament.³⁴ Third, the availability of statement of changes as a mechanism to amend and/or repeal the Rules leaves the Scheme open to repeated changes by Home Office Ministers. Despite such concerns and the peculiarities of the context, the approach to legislative design here is largely typical of contemporary immigration rule-making practices.

C. Substance

Appendix EU of the Immigration Rules makes provision for two immigration statuses. It essentially provides for special forms of indefinite leave to remain and limited leave to remain. Though the statuses are popularly referred to as 'settled status' and 'pre-settled status,' including by officials these two phrases do not appear in the Immigration Rules.³⁵ Instead, Appendix EU uses the staple language of 'indefinite leave to remain' and 'limited leave to remain.'³⁶

Both the eligibility and suitability criteria under the EU Settlement Scheme have been described as generous when contrasted with the more stringent position which applies to entitlement to permanent residence under the free movement framework and leave to remain under UK immigration law generally.³⁷ The UK Government has been at pains to emphasise that 'the main requirement for eligibility under the settlement scheme will be continuous residence in the UK.'³⁸ This is because the eligibility criteria for both types of leave granted under the Scheme are devoid of the onerous non-residence related requirements under free movement rules. For example, Appendix EU has no requirement for applicants to have comprehensive sickness insurance. Applications to the Settlement Scheme are also subject to less onerous suitability criteria compared to that applied to applications for leave in other parts of the Immigration Rules.³⁹

Generally, to be eligible for indefinite leave to remain under the Scheme, an EU citizen, or their qualifying family member, ought to have completed a continuous period of five years of residence in the UK with the qualification that 'no supervening

³⁴ As required under Section 13, European Union Withdrawal Act 2018; ILPA, 'Commentary on the EU Settlement Scheme and Appendix EU' (5 November 2018) [2.1-2.3].

³⁵ These terms were first used in a position paper by the UK Government: *HM, The United Kingdom's Exit from the European Union: Safeguarding the Position of EU Citizens Living in the UK and UK Nationals Living in the EU* (June 2016, Cm 9464).

³⁶ For example, see: Rule EU1, Immigration Rules Appendix EU: EU Citizens and Family Members.

³⁷ Home Office, *EU Settlement Scheme: Statement of Intent* (21 June 2018).

³⁸ *Ibid* [2.3].

³⁹ Home Office, *EU Settlement Scheme: Statement of Intent* (21 June 2018) [1.13]. However, see: Joint Council for the Welfare of Immigrants, *Broken Promises: The EU Nationals the Government Intends to Remove after Brexit* (25 October 2018). There was settled judicial review litigation brought by the JCWI on this issue before the Scheme opened fully.

event has occurred.’⁴⁰ For the purposes of this Scheme, a continuous period of residence means an applicant has been resident in the UK, and has not been absent from the country for more than six months within any twelve-month period. Furthermore, within that five years, the applicant ought not have been absent from the UK for a period exceeding 12 months without an ‘important reason’ justifying their absence. Applicants who lack the requisite five-year period of continuous residence in the UK at the date of application are eligible for a type of limited leave to remain granted under the EU Settlement Scheme – pre-settled status. At a minimum, in order to be granted pre-settled status under the Scheme, an applicant ought to evidence at least one month of residence in the UK within the six-month period before they make their application.⁴¹ This will grant limited leave to remain in the UK for five years. Even though the EU Settlement Scheme is constituted of these two distinct types of leave, there is an important interplay between the two immigration statuses: applicants granted limited leave to remain under this part of the Immigration Rules will become eligible for the indefinite leave to remain after completing the requisite five-year period of continuous residence in the UK.

Though the substance of the rules underpinning the Scheme are not the primary focus of this article, three elements of them are generally noteworthy in respect of assessing the underlying template being adopted by the Home Office. First, the thrust of the rules and policy is to make positive grant decisions. This is not typical of administrative schemes in the immigration context and the effects of the same template may be very different if deployed in a context with a more restrictive rules and policy. Second, the Scheme blurs the traditional distinction between a positive and negative decision. Both settled and pre-settled status decisions are grants, and the government are not recording outright refusals clearly.⁴² In many cases, a perceived ‘negative’ decision is more likely to be a grant of pre-settled status that ought to have been a grant for settled status, as opposed to an outright refusal. There is a significant difference in the rights and entitlements flowing from each status. For instance, pre-settled status does not constitute a right to reside for the purpose of social security benefits. This leads to a third point: individuals granted limited leave to remain (pre-settled status) under the Scheme will be vulnerable to future changes in the Immigration Rules. The political exigencies of the UK’s withdrawal from the European Union also mean that when the deadline for making applications has passed and the procedural safeguards offered by membership of the EU are no longer

⁴⁰ Rule EU11, Appendix EU, Immigration Rules.

⁴¹ Rule EU14, Appendix EU, Immigration Rules.

⁴² Instead, they are recording a category of ‘other outcomes,’ which is defined as ‘any outcome that did not result in a grant of leave because the application was withdrawn by the applicant, was invalid as it did not include the required proof of identity and nationality or other mandatory information, or was void because the applicant was ineligible to apply, for example because they were a British citizen.’

available, subsequent Governments could alter the terms of the Scheme or divert resources from its administration to the detriment of those who have been granted pre-settled status. A concern here is that the large number of individuals being granted pre-settled status – a time-limited form of leave to remain – creates the risk of a significant number of individuals being left without a legal basis for remaining in the UK when that leave expires. So far, three statutory instruments have been made, by negative resolution procedure, which adjust the rights conferred by pre-settled status.⁴³ Before these SIs came into force, an individual granted pre-settled status had the same right to benefits, allocation of housing, and homelessness assistance as anyone granted settled status (or any other form of indefinite leave to remain). Following the SIs coming into force, in order for an individual with pre-settled status to access certain types of benefits and tax credits, as well as housing assistance, they now require an additional EU right to reside in the UK, in addition to the limited leave to remain they obtain under pre-settled status. This creates a new layer of differentiation between the effects of the two statuses. There is, of course, scope for further differentiation in the coming years.

D. Temporal dimensions

A final noteworthy aspect of the Scheme's legislative design is that it has essentially been created as a 'pop-up' measure, intended not as a permanent fixture but to facilitate a transition to a 'unified' immigration system in which EU citizens are subject to the same regulatory scheme as other immigrants.⁴⁴ The consequence is that there are important temporal dimensions to the Scheme's structure.⁴⁵ The Scheme operates on the basis of a 'specified date' by which EU citizens ought to have been resident in the UK in order to be eligible to make applications and a cut-off date by which an application should be lodged to the Scheme. For a period, these timeframes were contingent on whether a Withdrawal Agreement was in place.⁴⁶

⁴³ The Child Benefit and Child Tax Credit (Amendment) (EU Exit) Regulations 2019, SI 2019/867; Allocation of Housing and Homelessness (Eligibility) (England) (Amendment) (EU Exit) Regulations 2019, SI 2019/861; The Social Security (Income-related Benefits) (Updating and Amendment) (EU Exit) Regulations 2019, SI 2019/872.

⁴⁴ The plans for a future skills-based immigration system are set out in HM Government, *The UK's Future Skills-Based Immigration System* (Cm 9722, December 2018)

⁴⁵ Issues of temporality have been under-developed in the administrative justice literature but there has been interest from public administration and policy scholars, see e.g. Michael Howlett and Klaus H. Goetz, 'Time, temporality and timescapes in administration and policy' (2014) 80(3) *International Review of Administrative Sciences* 477; Christopher Pollitt, *Time, Policy, Management: Governing with the Past* (OUP 2008). There has been a more longstanding interest in sociology, see generally: John Hassard (ed.), *The Sociology of Time* (Palgrave Macmillan 1990); Barbara Adam, *Time* (Polity Press 2004).

⁴⁶ Department for Exiting the European Union, *Citizens' Rights – EU Citizens in the UK and UK Nationals in the EU* (6 December 2018) [7-9].

The way the timeframes for the Scheme have been conceived can be seen as serving the purpose of incentivizing a steady—and thus manageable—flow of applications to the Scheme.⁴⁷ However, the varying potential timeframes may create complexity and confusion for those making applications to the Scheme, and potentially for those administering it. Furthermore, the time limits on when applications can be made and those that apply to family members seeking to join a grantee under the Scheme may create harsh results, especially in those cases on the boundary or with otherwise exceptional circumstances. The most important administrative justice implication of the temporary nature of the Scheme is, however, that we have to essentially see the scheme as two administrative justice processes: one prior to the deadline and one after. Before the deadline, the processes as discussed in this article will apply. After the deadline (whenever it actually arrives), the crux of the administrative justice challenge will be the handling of out-of-time applicants, who will likely be thrown into the hostile environment. It is not yet clear how that issue will be handled or what the scale of the issue will be, but it is a challenge which the design of the Scheme effectively stores for a future day.

3. Frontline Decision-Making

All of the above legal and policy framework naturally places a significant and complex demand on frontline administration. The Home Office's job in this respect, as the Commons Home Affairs Select Committee observed, is 'unprecedented in scale.'⁴⁸ Due to the considerable number of people eligible to apply for settled status, over a relatively short prescribed period, there are inevitably questions about the capacity of administration to cope with the sheer volume of applications. The main response of the Home Office has been to develop a new 'streamlined' process for applications which relies on two digital platforms: an app downloadable on a mobile phone or tablet, and an online form filled on the UK Government's website.⁴⁹ Those who fall within the scope of the Scheme must submit information on both of these two platforms which evidences the three broad categories required to meet the Rules: identity, residence, and suitability. Applicants are then directed to an online form to complete. At this point, a National Insurance Number is entered, which allows the Home Office to conduct an automated data check—using existing HMRC and DWP data—to determine the residence element of the Scheme's eligibility criteria.

⁴⁷ Steffen Altmann, Christian Traxler, and Philipp Weinschenk, 'Deadlines and Cognitive Limitations' (IZA Institute of Labour Economics 2017).

⁴⁸ House of Commons Home Affairs Select Committee, *Home Office Delivery of Brexit: Immigration* (HC 421, 2017-2019) [11].

⁴⁹ This process was tested on a small scale before its launch, see: Home Office, *EU Settlement Scheme – Private Beta Testing Phase 1 Report* (2018); Home Office, *EU Settlement Scheme: Private Beta Testing Phase 2 Report* (2019). For discussion of this testing, see: Independent Chief Inspector of Borders and Immigration, *An inspection of the EU Settlement Scheme* (2019), 5-6.

Generally, the immigration status granted under this Scheme come in the form of an official electronic document accessible through credentials sent via email, not a paper document.⁵⁰ The role of automation in this ‘streamlined’ form of application and decision-making, which is the core of the innovation in the new model of administrative justice underpinning the Scheme, is considered in this part of the article.

A. The integration of rule-based automation

Determining immigration applications is a difficult business⁵¹ and there have long been concerns about decision-making in the Home Office, as well as the quality of administrative decision-making in the UK more generally.⁵² Immigration decision-making requires the application of complex law and policy and is usually carried out by relatively junior caseworkers.⁵³ The evidence presented by applicants is, for a range of reasons, highly variable.⁵⁴ Home Office decision-making procedures offer an inherently limited form of justice. They are made in short timeframes and under substantial pressure to determine large volumes of applications overall (c.3.5 million each year).⁵⁵ In broad terms, the highest aspiration of this kind of process is for decisions to be made efficiently and with accuracy.⁵⁶

The Settlement Scheme represents a significant departure from the Home Office norm *vis-à-vis* initial decision-making. The norm is a paper application on a form, with attached evidence, submitted to a human caseworker who then makes a decision based on law and policy. A decision letter usually then follows. This typical

⁵⁰ An individual will not get a physical document unless they are from outside the EU, EEA or Switzerland and do not already have a biometric residence card.

⁵¹ See generally on the complexity of frontline official decision-making: Michael Lipsky, *Street Level Bureaucracy: Dilemmas of the Individual in Public Services* (Russell Sage 1980); Bernardo Zacka, *When the State Meets Street* (HUP 2017).

⁵² For an exploration of the types of problems that arise, see: Administrative Justice and Tribunals Council, *Right First Time* (2011). For discussion relating to the specific context of immigration, see: Home Affairs Committee, *The Work of the UK Border Agency*, (HC 587, 2010-11); Amnesty International, *Get it Right: How Home Office Decision Making Fails Refugees* (2004); Amnesty International/Still Human Still Here, *A Question of Credibility* (2013); Independent Chief Inspector of Borders and Immigration, *Entry Clearance Decision-Making* (2011).

⁵³ The Law Commission is currently undertaking a law reform project considering the complexity of the immigration rules: The Law Commission, *Simplification of the Immigration Rules: Consultation Paper* (Consultation Paper 242, 2019). See also: Matthew Williams, ‘Legislative Language and Judicial Politics: The Effects of Changing Parliamentary Language on UK Immigration Disputes’ (2017) 19 *British Journal of Politics and International Relations* 592.

⁵⁴ Reasons for this may include applicants not having access to historic documents or documents from another jurisdiction.

⁵⁵ Independent Chief Inspector of Borders and Immigration, *Annual Report for the Period 1 April 2017 to 31 March 2018* (June 2018), 15.

⁵⁶ Mashaw (n 11) (discussing the ‘bureaucratic rationality’ model).

system will be part of the process under the Scheme, but it will effectively become an ancillary process, with automated data checks being given priority in the vast majority of cases. This switch fits into a pattern of a rapidly growing role for technology, and particularly automation, in immigration administration.⁵⁷

The automated part of the application process will use an algorithm to check HMRC and DWP data for proof of residency.⁵⁸ Specifically, three fields of data – an applicant’s name, date of birth, and national insurance number – is sent automatically to the DWP and HMRC. Once this information has been received by those two Departments, it is transferred to a ‘Citizen Matching Layer,’ which identifies the applicant and searches the respective Departmental databases for details about the matched applicant.⁵⁹ The information is then relayed back to the Home Office and transferred to its ‘business logic’ – a rule-based algorithm which is yet to be fully disclosed publicly – which processes the information to establish the period of continuous residence in the UK.⁶⁰ The basic details of this data sharing arrangement are set out at *Table 1*. Once an automated check is complete, a caseworker and the applicant see one of three outcomes: a pass (5 years period of residence); a partial pass (less than 5 years of residence); or a fail (meaning the information sent from the Home Office’s application programming interface matches no existing records). It is at this final stage of the automated check where human official engagement begins. Where the data checks result in a partial pass, and the applicant is seeking indefinite leave to remain, they will be required to submit additional evidence for those periods not sourced by the automated data checks. Officials from the Home Office then deal with the claim.

Table 1: General data sharing structure

	HMRC	DWP
Data fields shared	• Employer Name • Employer Reference • Employer Address • Start date • Leaving date • Taxable payment	• Correlation ID • Start date • End date • Benefit type • Date of death • Gone abroad flag

⁵⁷ This was recently the subject of a debate in Parliament, see: HC Deb 19 June 2019, vol 662, cols 316-325. For a recent investigation of data systems in the Home Office, see: The Bureau of Investigative Journalism, *Government Data Systems: The Bureau Investigates* (2019). For research from Canada covering similar trends, see: Citizen Lab, *Bots at the Gate: A Human Rights Analysis of Automated Decision Making in Canada’s Immigration and Refugee System* (University of Toronto 2018).

⁵⁸ For a detailed technical analysis of how this system works, see: Phil Booth, *Automated Data Checks in the EU Settlement Scheme* (MedConfidential 2019).

⁵⁹ The process therefore relies on what could be referred to as a ‘data double,’ see: Kevin D. Haggerty and Richard V. Ericson, ‘The surveillant assemblage’ (2000) 51(4) *British Journal of Sociology* 605.

⁶⁰ On the concern about such systems generally, see: Frank Pasquale, *Black Box Society: The Secret Algorithms That Control Money and Information* (HUP 2016).

	• Payment frequency • Date self-assessment ('SA') record set up • SA Employment Income • SA Self Employment Income • SA Total Income • Tax year • Tax Return Date of Receipt	• State Pension and New State Pension • Housing Benefit • Jobseekers Employment Support Allowance • Carer's Allowance • Universal Credit • Personal Independent Payment • Disability Living Allowance • Income Support • Maternity Allowance • Incapacity Benefit • Attendance Allowance • Severe Disablement Allowance
Legal basis of data sharing	• Section 18, Commissioners of Revenue and Customs Act 2005 (to be read in conjunction with sections 17 and 20 of that Act and section 19, Anti-Terrorism, Crime & Security Act 2001) • Section 36, Immigration, Asylum & Nationality Act 2006 • Section 40, UK Borders Act 2007 • Section 21, Immigration and Asylum Act 1999 • Section 36, Immigration, Asylum and Nationality Act 2006 • Common Law Power of the Secretary of State	• Section 20, Immigration and Asylum Act 1999 (as amended by Section 55, Immigration Act 2016) • Common Law Power of the Secretary of State

B. Analysis of the rule-based automation process

The potential benefits of the Home Office's evolved design for determining applications are multiple, but two are often cited as being most important. First, there is the anticipated cost saving. Conservatively, hundreds of thousands of successful applications will be effectively determined by automated decisions alone. Millions will go through the system. The *Memorandum of Understanding (Process) between HMRC (Data Directorate) and Home Office* is one of two agreements that enables the automated checks process. The MOU states that the 'estimated API development and delivery charges in respect of Income Verification and EU Exit Settlement Schemes are estimated @ £1.1m.' This figure does not represent all of the costs of the automated aspects of the Scheme but it is indicative that the planned costs of the Scheme will be very low compared to more traditional forms of decision-making.⁶¹ This potentially reduces the costs to the taxpayer of administration. This ought to be caveated,

⁶¹ According to the impact assessment produced for the Scheme, it is expected to cost the Home Office between £410 million and £460 million, depending on the number and types of applicants, see: Home Office, *Impact Assessment for EU Settlement Scheme* (HO0316, July 2018).

however, by the fact that automation does not necessarily eliminate labour and time costs, but could also transfer burdens of the legal and policy framework away from frontline officials (*e.g.* to the applicants themselves, who become essentially data-entry clerks, and to technologists designing and maintaining the system).⁶² The permissiveness of the underlying rules also likely contributes substantially to any costs savings which do materialise – rules which create less hard cases are easier to administer. Second, the automated checks are very quick. Many who pass through them successfully will get a decision in very little time. This is no minor gain: one of the major preferences of citizens using administrative justice processes is widely understood to be speed of decision-making.⁶³ If, and the extent to which, these potential benefits are realised will likely play an important role in shaping important norms concerning how administration uses automatic decision-making in the coming years.

Though it is important to keep the potential benefits of the Home Office's approach to automation in mind, it is equally important, as part of any administrative justice analysis, to examine carefully what types of problems and grievances an initial decision-making process is liable to give rise to, and thus what shape the demand for redress may take. Michael Adler has articulated a general typology of administrative grievances, conceived in relation to non-digital administration, which can help identify the potential problems in this respect (see *Table 2*).⁶⁴ His framework disaggregates types of grievance and groups them in 'bottom-up' (*i.e.* ordinary) terms and a 'top-down' (*i.e.* elite) terms.⁶⁵ This has the benefit of a typology that 'meshe[s] well with the ways in which people define and describe the problems that they experience but would probably not have reflected some very important analytical distinctions.'⁶⁶ Using Adler's typology, it is possible to construct an indicative survey of the types of administrative grievances liable to arise under the Settlement Scheme model specifically, and by extrapolation, those entailed in the underlying automated model.⁶⁷ When applying Adler's typology to identify the scope for and nature of

⁶² See *e.g.* Mary L. Gray and Siddharth Suri, *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass* (Houghton Mifflin Harcourt 2019). See also: Julian Christensen, Lene Aarøe, Martin Baekgaard, Pamela Herd, and Donald P. Moynihan, 'Human Capital and Administrative Burden: The Role of Cognitive Resources in Citizen-State Interactions' (2020) 80(1) *Public Administration Review* 127.

⁶³ See *e.g.* Alex Bryson and Richard Berthoud, 'Social Security Appeals: What Do the Claimants Want?' (1997) 4 *JSSL* 17.

⁶⁴ Michael Adler, 'Constructing a Typology of Administrative Grievances: Reconciling the Irreconcilable?' in Reza Banakar and Max Travers, *Theory and Method in Socio-Legal Research* (Hart 2005), 287-288.

⁶⁵ *Ibid*, 288.

⁶⁶ *Ibid*, 289.

⁶⁷ The experience of the application process, and any subsequent complaint will, to varying extents, be conditioned by the circumstances of the individual applicant concerned. Such factors are directly relevant to how the Scheme will be experienced but the analysis here proceeds at a general level.

grievances potentially arising from the Scheme, it is helpful to think in terms of two spheres of decision-making: the automated decision; and the traditional process. In practice, these spheres are closely linked, and the relationship between the two spheres itself raises questions about technology-official interactions, but they constitute distinct processes and therefore are liable to create different grievances also.⁶⁸ Placing both of these categories against Adler's composite typology, and drawing upon recent experience with immigration administrative justice more broadly, it is possible to identify six categories of grievance liable to arise.

⁶⁸ On automation in decision making, see generally: House of Commons Science and Technology Committee, *Algorithms in decision-making: Fourth Report of Session 2017-19* (HC351, 2018); Andrew Le Sueur, 'Robot Government: Automated Decision-Making and its Implications for Parliament' in Alexander Horne and Andrew Le Sueur (eds), *Parliament: Legislation and Accountability* (Hart 2016). On the importance of considering the interplay between the automated and human decision-makers, see: Rob Kitchin, 'Thinking critically about and researching algorithms' (2017) 20(1) *Information, Communication & Society* 14; R. Stuart Geiger, 'Bots, bespoke, code and the materiality of software platforms' (2014) 17(3) *Information, Communication & Society* 342.

Table 2: Typology of administrative grievances

Top-Down Typologies	Bottom-up Typologies	Composite Typologies	Examples
Error of fact Error of law Abuse or misuse of discretion/discrimination	Unjust decisions and Actions	Decision wrong or unreasonable	Decision perceived to be wrong or unfair Decisions involving discrimination Decisions that involve imposition of unreasonable conditions Refusal to accept liability
Incompetence Unreliability Lack of respect Lack of privacy Lack of responsibility No apology	Administrative errors Unacceptable treatment by staff	Administrative errors Unacceptable treatment by staff	Records lost or misplaced; no record of information received Staff rude and unhelpful; staff incompetent or unreliable; presumption of 'guilt' by staff; threatening or intimidating behaviour by staff; staff do not acknowledge mistake or offer apology
Unacceptable delay	Delay	Unacceptable delays	Delays in making appointments; delays in making decisions; delays in providing services.
Lack of participation No information	Information or communication problems	Information or communication problems	Lack of information; conflicting or confusing information; poor communication; objections ignored by staff; lack of privacy.
Lack of choice Resources Value for money	Service unavailable Service deficient in quality or quantity	Benefit/service unavailable or deficient in quality or quantity or too expensive	Benefit/service withdrawn (either for everyone or some people); benefit /service deficient in quantity or quality.
Policy	General objections to policy	General objections to policy Other grievances	Policy unacceptable Other types of grievance not covered in the [composite] typologies.

First, there are those decisions perceived to be wrong or unreasonable. There are a range of familiar concerns in this respect, *e.g.* decisions that are legally flawed, decisions involving discrimination, refusal to accept liability, and decisions where relevant evidence was not considered. One major concern with the Settlement Scheme

are those cases where applicants simply may not have the necessary evidence, raising a question of how human decision-makers will respond to this.⁶⁹ The use of automated checks also opens up the possibility of new decision-making behaviours, and thus creates scope for new types of grievance of this kind.⁷⁰ One example may be automation bias, *i.e.* that a decision-maker may favour information produced by a computer over the evidence and claims submitted by the applicant through traditional channels.⁷¹ The system of automated checks itself is also liable to produce various problems. For instance, the basis – or rationale – of automated decisions are unclear. It is understood that the automated data checks will not be retained by the Home Office, creating further concerns about the lack of an audit trail. This can make decisions difficult to challenge or even difficult to understand. It is unclear whether applicants will be able to know what information about them has been disclosed to the Home Office by the DWP and HMRC via automated checks.⁷² The automatic check mechanism may also give rise to grievances based on perceived discrimination, which is a widespread concern as regards algorithm-based processes.⁷³ There is no magic to these systems: they run on information held in databases. The quality of the decision turns heavily on the quality of the data being fed in to the algorithm and the selection of the scope of the databases to be included. Two issues have already generated debate in this respect. One is the observation that DWP data is of lesser quality than HMRC data (HMRC is a digitally-advanced public body). The concern here is that vulnerable people are more likely to pass through DWP systems than HMRC systems (given the functions of each of those departments) and will therefore be at greater risk of being tripped up by the DWP's allegedly lower-quality input data. Second, data from working tax credit, child tax credit, and child benefit records, all managed by HMRC, is not being shared as part of the process. As it is more likely that women are in receipt of these benefits, there is a risk that the exclusion of this data means women are at a greater risk of not passing the automated check. It is immensely difficult to examine discriminatory impacts in this context as the Home Office – despite using digital systems – appears to be collecting and publishing only very limited information on decision making, which excludes basic information such as gender.⁷⁴

⁶⁹ See *e.g.* Joint All Party Parliamentary Group, *Roma and Brexit* (2018).

⁷⁰ See *e.g.* Jennifer Raso, 'Displacement as Regulation: New Regulatory Technologies and Front-Line Decision-Making in Ontario Works' (2017) 32(1) *Canadian Journal of Law & Society* 75.

⁷¹ Mary T. Dzindolet, Scott A. Peterson, Regina A. Pomranky, Linda G. Pierce, and Hall P. Beck, 'The role of trust in automation reliance' (2003) 58(6) *International Journal of Human-Computer Studies* 697.

⁷² Open Rights Group and ILPA, 'EU Settled Status Automated Checks: Proposed outcomes, concerns and questions' (2019).

⁷³ For a widely read account of key concerns, see: Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police and Punish the Poor* (St. Martin's Press 2018).

⁷⁴ M. Sumption, *Not Settled Yet? Understanding the EU Settlement Scheme using the Available Data* (The Migration Observatory 2020).

Second, there are those grievances flowing from administrative errors or unacceptable behaviour by staff. Again, many of the grievances liable to arise under the Settlement Scheme are familiar concerns, *e.g.* where staff are rude and unhelpful, where staff are incompetent or unreliable, where there is a presumption of deception by staff, where staff do not acknowledge a mistake or offer an apology, where records are lost or misplaced, or where there is no record of information received. Typical risks here may be mitigated by the particular purpose of the Scheme, which is designed to be generous. The new automated checks system, however, adds a new layer of complexity, creating the scope for grievances on the basis of technical faults afflicting individual decisions or where decisions are being based on erroneous or otherwise deficient databases. The mainstream use of automation also opens up the risk of mistaken data leaks and similar problems. Furthermore, fixing some problems with the application of technology are not within the gift of the Home Office. For instance, during the second phase of testing it was found that one EU member country had not implemented one of the international biometric data standards in its passports, which caused the app to identify applications as fraudulent.⁷⁵ Another country had used defective chips.

Third, grievances may arise from what is perceived to be unacceptable delays. The Home Office has a long history of complaints around delay. There is a clear risk, given the scale of the administrative challenge, that caseworkers making decisions in the Home Office are overwhelmed, especially without further investment in staffing.⁷⁶ With the automated checks, delays may be created by technical errors, the system being overwhelmed, or general all-out system failures. During phase two testing of the Scheme, there were two occasions where 'a technical disruption' prevented HMRC data being returned to applicants, one of which resulted in the service being temporarily suspended. Inspectors were told this was 'an unplanned outage of HMRC systems over a weekend,' which had resulted in applicants receiving a 'not found' message.⁷⁷ Given that speed is one of the widely-claimed benefits of automation, a key issue will be whether the underpinning technology is sufficient robust to realise that benefit. There is also the issue that many applicants will be required to provide further documentary evidence and this may mean application times are increased.

⁷⁵ Independent Chief Inspector of Borders and Immigration, *An inspection of the EU Settlement Scheme* (2019), 18.

⁷⁶ For related concerns, see: House of Commons Home Affairs Select Committee, *Home Office Delivery of Brexit: Immigration* (3rd Report of Session 2017-19).

⁷⁷ Independent Chief Inspector of Borders and Immigration (n 77) 20.

Fourth, grievances may arise from information or communication failings. Grievances of this sort may arise where people are unaware of the Scheme.⁷⁸ It may also relate to a lack of information or awareness about how the system works, such as lack of knowledge about important deadlines. Given much of the process is digitalised, information about assisted digital services, and the information provided by those services, also may be a source of grievances.⁷⁹ Beyond this, there may be familiar issues of flawed communications of decisions and with decision-makers. Given the cross-departmental decision-making structure, there may also be data communication issues between different departments. Perhaps the most important issue in this context from a legal perspective is the meaningful communication of a reasoned decision.⁸⁰ As the basic logic of the automated checks is not known, it is not entirely clear how the traditional notion of a reasoned administrative decision fits with the Scheme. Once a decision is communicated, status will be granted in digital form only. This potentially stores up different types of future communication problems around the already vexed and complex issues of the need to prove status, especially where applications have been made on behalf of other (e.g. children in care).⁸¹

Fifth, there are grievances which flow from a service being perceived to be unavailable, deficient, or expensive. The particular aspects of the Scheme which may pose problems in this respect include, for example, absence of gateway data needed to use services. A clear example of this is a child. Children are unlikely to receive positive results from the data checks because they will not have a National Insurance Number and are less likely to have any engagement with DWP or HMRC. The digital dimensions of the Scheme also create some particular issues, such as the risk of people being digitally excluded from the service. Another prominent concern around the Scheme's use of technology is that parts of the application were only compatible with Android smartphones, cutting out vast parts of the population who do not use

⁷⁸ The Home Office has taken steps to try to raise awareness of the Settlement Scheme. For instance, they created briefings with 'key facts.' One prominent activity, designed to enable support with applications, was the dissemination of information about the Scheme to employers – the 'employers' toolbox.'

⁷⁹ Assisted digital services were provided in collaboration with an external organisation, We Are Digital. This organisation then worked with local 'delivery partners' across the UK. For analysis of some of the issues with service provision of this kind, see: JUSTICE, *Preventing Digital Exclusion from Online Justice* (2018); Civil Justice Council, *Assisted Digital Support for Civil Justice System Users: Demand, Design, and Implementation* (Civil Justice Council 2018).

⁸⁰ *Oakley v South Cambridgeshire DC* [2017] EWCA Civ 71. For discussion, see: Mark Elliott, 'Has the Common law duty to give reasons come of age yet?' [2011] PL 56; Jennifer Raso, 'Unity in the Eye of the Beholder? Reasons for Decision in Theory and Practice in the Ontario Works Program' (2020) 70(1) UTLJ 1.

⁸¹ On the wider sociological implications of paper documentation, see e.g. Matthew S. Hull, *Government of Paper: The Materiality of Bureaucracy in Urban Pakistan* (University of California Press 2012).

Android devices or who do not have a smartphone at all – effectively a form of digital bureaucratic disempowerment.⁸²

Sixth, there is scope for general objections to policy underpinning the Scheme. In many ways, it is difficult to separate out the policy debate around the Settlement Scheme from wider policy and political debates surrounding migration and Brexit. For instance, some perceive that the need to apply is, in principle, wrong. However, there are a range of more specific policy oriented grievances which could arise under the Scheme. The automated data checks add a new set of considerations here too. We are already seeing growing general objections to government departments sharing administrative data and automating processes.⁸³ Other objections may pertain to the overall lack of transparency in the process.

While the possible benefits of the government's approach must be kept in mind, it is clear there are a range of risks involved in the design which are liable to give rise to grievances. Many of these risks are inherent in administrative processes generally but some are specific to the automated process adopted. While caution ought to be shown in judging innovation at the outset, there is a real sense in which the Scheme is a giant experiment in administrative justice. The survey here provides a more precise conceptualisation of risks to individuals and what an effective system of redress ought to be able to grapple with. The next section of this article considers the approach to redress under the Scheme, and the extent to which it adequately provides safeguards for individuals.

4. Redress

While political pressures may prove to be a corrective to high-profile systemic flaws that grab headlines from time to time, there is a long-accepted need for robust redress mechanisms through which individual applicants can challenge adverse decisions.⁸⁴ An applicant refused a status under the Scheme before the deadline can make a further application.⁸⁵ This means that, in some instances, fresh applications can be made to

⁸² Michael Lipsky, 'Bureaucratic Disempowerment in Social Welfare Programs' (1984) 58(1) *Social Service Review* 3.

⁸³ For critical analysis of previous attempts to data share for the purposes of immigration administration, see: Lucinda Hiam, Sarah Steele, and Martin McKee, 'Creating a 'hostile environment for migrants': the British government's use of health service data to restrict immigration is a very bad idea' (2018) 13(2) *Health Economics, Policy and Law* 107; Liberty, *Care Don't Share: Why we need a firewall between essential public services and immigration enforcement* (2018). There has recently been litigation in this context too, see: *R. (Open Rights Group & The3million) v Secretary of State for the Home Department* [2019] EWHC 2562 (Admin).

⁸⁴ See e.g. Home Office, Report of the Committee on Immigration Appeals Cmnd 3387 (1967).

⁸⁵ Home Office, *EU Settlement Scheme: Statement of Intent* (21 June 2018) [5.18].

avoid an onward challenge, potentially providing a quicker and cheaper fix. Redress processes are therefore particularly valuable for those who keep running into a problem which no amount of fresh applications can resolve, or those who have been assigned what they believe to be an incorrect status. A central administrative justice question to be asked of the Settlement Scheme is what the approach to redress will be for those in this position. It is clear, however, this aspect of the template being adopted is underdeveloped.

A. Models of immigration redress

Before turning to government approach to redress, it is useful to start with the current operation of immigration redress. There are essentially three main systems which are deployed. First, there is administrative review.⁸⁶ This is a mechanism whereby another official in the Home Office reviews the papers from the initial decision for casework errors. The decision can then be changed if there is an error. Second, there are tribunal appeals.⁸⁷ An appeal is an oral or paper process in the First-tier Tribunal (Immigration and Asylum Chamber) where all aspects of the merits of the initial decision are considered by an independent tribunal judge. The judge can substitute a new decision for the Home Office decision. As part of ongoing HMCTS reforms, many of these appeals are due to move online.⁸⁸ This raises the prospect that an individual's entire application and appeal process could be digitally facilitated. Finally, there is judicial review. This is a process which, in immigration cases, usually takes place in the Upper Tribunal (Immigration and Asylum Chamber). A judge reviews a decision on the basis of narrow legality grounds (*e.g.* procedural fairness, human rights) rather than providing a consideration of the full merits.⁸⁹ There is a permission stage and, if that is passed, a substantive hearing. The judge can declare a decision unlawful and the decision then has to be retaken afresh by the Home Office.⁹⁰ Judicial review is also potentially expensive. Unless they are eligible for legal aid or are granted a costs cap, claimants are at risk of paying the legal costs of both sides if they lose.⁹¹ It is possible

⁸⁶ Robert Thomas and Joe Tomlinson, 'A Different Tale of Judicial Power: Administrative Review as a Problematic Response to the Judicialisation of Tribunals' [2019] PL 537.

⁸⁷ Joe Tomlinson and Byron Karemba, 'Tribunal Justice, Brexit, and Digitalisation: Immigration Appeals in the First-tier Tribunal' (2019) 33(1) *Journal of Immigration, Asylum & Nationality Law* 47.

⁸⁸ Ministry of Justice, *Transforming Our Justice System* (London, 2016), p.15. For wider analysis of the reforms, see: Tomlinson (n 4) Ch. 3; Joshua Rozenberg, *The Online Court: Will IT Work?* (Legal Education Foundation 2017); Hazel Genn, 'Online Courts and the Future of Justice' (The Birkenhead Lecture 2017).

⁸⁹ A philosophy famously articulated in *Associated Provincial Picture House, Limited v Wednesbury Corporation* [1948] 1 K.B. 223.

⁹⁰ For analysis of how this process works, see: Robert Thomas and Joe Tomlinson, *Immigration Judicial Reviews: An Empirical Study* (Nuffield Foundation 2019); Robert Thomas, 'Mapping Immigration Judicial Review Litigation: An Empirical Legal Analysis' [2015] PL 652.

⁹¹ For context and analysis, see: Joe Tomlinson and Alison Pickup, 'Reforming Judicial Review Costs Rules in an Age of Austerity,' forthcoming in Andrew Higgins (ed), *The Civil Procedure Rules at Twenty* (OUP).

to imagine different systems of redress being used, but the contemporary policy imagination in this context largely revolves around these three systems.

These three systems, as currently implemented, each have their own complex ecosystems, and distinct benefits and disadvantages. They each deal with large and fluctuating caseloads, and have been the subject of extensive reforms in recent years. There is, however, one clear and dominant policy drift: that tribunal appeal rights have been restricted, placing greater emphasis on administrative review and judicial review. Recent reforms therefore, collectively, represent a major de-judicialisation of the overall immigration administrative justice system.⁹² Many applicants, who once had the opportunity of a tribunal appeal before an independent judge, before falling back on judicial review, now only have access to administrative review. There have been some benefits of de-judicialisation, such as reduced costs for the state and quicker decisions. However, the growing use of administrative review and the corresponding marginalisation of tribunals has resulted in a system where individuals are significantly less likely to succeed in overturning an adverse immigration decision.⁹³ Before access to the tribunal was severely restricted by provisions in the Immigration Act 2014, around 49% of appeals were successful. Whereas, over the same period in 2015/16, the success rate for administrative reviews conducted in the UK was 8%, falling to just 3.4% the year after.⁹⁴ In this shifting landscape, it was an open question whether applicants to the Settlement Scheme, which has been widely seen to be 'more generous' in its rules, would be given access to a tribunal appeal or not. Equally, it was also an open question whether the use of automation—and its potential to generate grievances of a distinct nature—would lead to redress innovation.

B. Redress Design

When the long-awaited Immigration and Social Security Co-ordination (EU Withdrawal) Bill finally arrived before Parliament in late 2018,⁹⁵ it was widely expected that a tribunal appeal right would be included for those making use of the Settlement Scheme.⁹⁶ These rights were, however, not present in what was a rather thin piece of legislation, mostly constituted of delegated powers. As the Home Office indicated in its *Statement of Intent* on the Settlement Scheme published in June 2018, primary legislation is required to make provision for a tribunal right and it was

⁹² Thomas and Tomlinson (n 88).

⁹³ Ibid, 545-555.

⁹⁴ Ibid.

⁹⁵ Immigration and Social Security Co-ordination (EU Withdrawal) Bill (HC 309).

⁹⁶ Home Office, *EU Settlement Scheme: Statement of Intent* (2018) [5.19].

expected this would be in place when the Scheme opened in March 2019.⁹⁷ At that point, only a system of administrative review against decisions made under this Scheme has been established, via the Immigration Rules.⁹⁸

Appendix EU identifies two broad categories of decisions amenable to administrative review.⁹⁹ First, applicants can seek a review of decision taken under that Scheme if it relates to a refusal on the basis applicant does not meet the eligibility requirements under Appendix EU. Second, applicants can make an application for administrative review of decisions which relate to the grant of limited leave to remain under paragraph EU3 of Appendix EU. Notably, administrative review is not available against a decision where an application is refused on suitability grounds.¹⁰⁰ In contrast to the administrative review system generally run by the Home Office, the system under the Scheme allows an individual to submit further evidence, which will then be considered alongside their original application by another Home Office caseworker.

The availability of an appeal right for the Scheme was agreed to in the first Withdrawal Agreement. The relevant part of that Withdrawal Agreement provides that the pre-existing safeguards for decisions made under the free movement framework also apply to decisions concerning the residence rights of persons who fall under the scope of the Settlement Scheme.¹⁰¹ These safeguards principally include ‘the right to access to judicial and, where appropriate, administrative redress procedures in the host Member State to appeal against or seek review of any decision.’ Furthermore, under the applicable EU law incorporated into the Agreement, ‘the redress procedures shall allow for an examination of the legality of the decision, as well as of the facts and circumstances on which the [decision] is based.’¹⁰² This commitment is partly why the UK Government initially promised that a right of appeal against decisions made under the Settlement Scheme would be introduced. In the Government’s own words, ‘this would allow the UK courts to examine the decision to refuse status under the scheme and the facts or circumstances on which the decision was based.’¹⁰³ Even though the Home Office had committed to fully

⁹⁷ Home Office, *EU Settlement Scheme: Statement of Intent* (2018) [5.19].

⁹⁸ Immigration Rules Appendix AR (EU): Administrative Review for the EU Settlement Scheme.

⁹⁹ An application for administrative review comes with an £80 fee.

¹⁰⁰ Immigration Rules Appendix EU (AR).

¹⁰¹ Article 21, *Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community, as endorsed by leaders at a special meeting of the European Council on 25 November 2018*.

¹⁰² Article 31, Directive 2004/38/EC of the European Parliament and of the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States amending Regulation (EEC) No 1612/68

¹⁰³ Home Office, *EU Settlement Scheme: Statement of Intent* (2018) [5.19].

implementing the EU Settlement Scheme in the event of the UK withdrawing from the EU without a withdrawal agreement in place, it was clear that, in that situation, the Scheme would be without the right of appeal repeatedly promised in previous policy documents.¹⁰⁴ According to a policy paper published by the Department for Exiting the EU in December 2018, in such circumstances 'EU citizens would have the right to challenge a refusal of UK immigration status under the EU Settlement Scheme by way of administrative review and judicial review.'¹⁰⁵ The situation created seemed to be that: if there is a withdrawal agreement, and an accompanying Withdrawal Agreement Bill inclusive of an appeal right, then applicants to the Scheme will have access to a tribunal appeal. If there is not a deal, inclusive of an appeal right, then applicants will not have access to a tribunal appeal. Put simply, the design of this element of the template was no deal then no appeal.

In the first published version of the Withdrawal Agreement Bill, there was a power conferred on Ministers to make regulations providing for appeal rights against immigration decisions made under the Scheme.¹⁰⁶ There was, however, no obligation for the Minister to make such regulations. The accompanying EU Withdrawal Agreement Bill also included, as part of Clause 11, a Henry VIII power for Ministers 'by regulations [to] make provision for, or in connection with, reviews (including judicial reviews) of decisions with subsection (2)(g)' (*i.e.* 'any other decision made in connection with restricting the right of a relevant person to enter the United Kingdom'). There was no justification in sight for this power, even in the extensive Delegated Powers Memorandum accompanying the Bill.¹⁰⁷ Both provisions were enacted in the European Union (Withdrawal Agreement) Act 2020.¹⁰⁸ A tribunal appeal right eventually materialised by way of The Immigration (Citizens' Rights Appeals) (EU Exit) Regulations 2020, long after the Scheme was rolled out.¹⁰⁹

C. Analysis of the proposed model of redress

What does this approach reveal about template of administrative justice underpinning the Scheme? One possible answer is that redress appears to be an afterthought of the government compared to initial application processes. At one level, this can be justified. There are good reasons for the focus to be on initial decision-making processes, making sure they work well, and preventing the need for redress in the first

¹⁰⁴ Department for Exiting the European Union, *Policy Paper: Citizens' Rights – EU Citizens in the UK and UK Nationals in the EU* (2018) [9].

¹⁰⁵ *Ibid* [11].

¹⁰⁶ Clause 11, European Union (Withdrawal Agreement) Bill 2019-20.

¹⁰⁷ *Memorandum concerning the Delegated Powers in the EU (Withdrawal Agreement) Bill for the Delegated Powers and Regulatory Reform Committee* (2019).

¹⁰⁸ Section 11, European Union (Withdrawal Agreement) Act 2020

¹⁰⁹ The Immigration (Citizens' Rights Appeals) (EU Exit) Regulations 2020, SI 2020/61.

place.¹¹⁰ However, at the same time, the design of this Scheme reveals a lack of continuing lack of joined-up thinking about the overarching process an individual may pass through. The departmental and operational divide between the Home Office (responsible for initial decisions and administrative review) and HM Courts and Tribunals Service (responsible for tribunals and judicial review) may be, at least in part, responsible for this apparent disjuncture.¹¹¹ From another perspective, what is most striking about the approach to redress under the Scheme is that it appears to be the conscious policy position that the type (and thus quality) of administrative redress that individuals will be afforded is contingent upon a withdrawal agreement being approved by Parliament.

The central question, however, is whether the redress system design being adopted for the Settlement Scheme is the correct one to deal with the grievances liable to arise, as identified above.¹¹² As a tribunal appeal finally emerged, the principal concern that remains is that the automated checks system creates the possibility of novel types of grievance. These include, for instance, grievances which cut across both principles of data and equality law, as well as the application of general public law principles to automated decisions.¹¹³ Limited scholarly consideration has been given to how judicial review be used to challenge automated decisions.¹¹⁴ Some fundamental and complex questions are, however, raised by the prospect. Can and should the ordinary principles of judicial review, as they currently exist, apply? Does the current judicial review procedure fit?¹¹⁵ How do you sufficiently prove automated errors in an opaque system?¹¹⁶ Given that all decisions rest on the same algorithmic logic, does any individual case implicitly challenge the whole decision-making

¹¹⁰ Administrative Justice and Tribunals Council, *Right First Time* (2011); Robert Thomas, 'Administrative Justice, Better Decisions, and Organisational Learning' [2015] PL 111.

¹¹¹ This has long been the situation, as was noted in Mark Freedland, 'The Crown and the Changing Nature of Government' in Sebastian Payne and Maurice Sunkin (eds), *The Nature of the Crown: A Legal and Political Analysis* (OUP 1999).

¹¹² Varda Bondy and Andrew Le Sueur, *Designing Redress: A Study About Grievances Against Public Bodies* (Public Law Project 2012).

¹¹³ There is only very limited discussion on this in the UK, see: Marion Oswald, 'Algorithm-assisted decision-making in the public sector: framing the issues using administrative law rules governing discretionary power' (2018) *Philosophical Transactions of the Royal Society A*; Jennifer Cobbe, 'Administrative Law and the Machines of Government: Judicial Review of Automated Public-Sector Decision-Making' (2019) LS 636.

¹¹⁴ Other jurisdictions, such as the U.S., have started to see constitutional law challenges in this context, e.g. *Loomis v. Wisconsin*, 137 S. Ct. 2290 (2017). See further: Rashida Richardson, Jason M. Schultz, and Vincent M. Southerland, *Litigating Algorithms 2019 US Report: New Challenges to Government Use of Algorithmic Decision Systems* (AI Now Institute 2019).

¹¹⁵ Cobbe (n 116) raises the point, for example, that the three-month time limit on claims poses difficulties.

¹¹⁶ Jenna Burrell, 'How the machine "thinks": understanding opacity in machine learning algorithms' (2016) 3(1) *Big Data & Society* 1.

structure?¹¹⁷ These questions admit no straightforward answers. It could be argued that a tribunal appeal is more fitted to the job of considering the substance of such an issue, given it can engage squarely with the facts of the case and re-take the whole decision. Either way, the Scheme may be the site where judicial review is more squarely confronted with automated public sector decision-making. The possibility of such novel issues requiring resolution does not appear to have been in contemplation.

Overall, the experience with redress under the Scheme shows that the template underpinning the Scheme does not rest on anything near to a coherent theory of fit between the grievances liable to arise and the modes of redress adopted. This could be viewed as a failure of policymaking. At the same time, however, administrative justice thought is itself underdeveloped in this area. There have been a range of attempts to generate principles of redress and redress design, both inductively and deductively.¹¹⁸ Scholarship also have a developed general accounts of the value of legal forms of justice compared to political and other modes of securing justice against the state.¹¹⁹ Perhaps the most advanced account of administrative justice design is Bondy and Le Sueur's work on redress design.¹²⁰ Yet we do not have a sufficiently developed theory of, as Le Sueur and Bondy put it, what 'a good "fit" between the types of grievance and the redress mechanism' looks like.¹²¹ This growth of digital administrative systems is once again illuminating this deficit. Building a more sophisticated account will involve various complex considerations and trade-offs, including the following factors: categories of wrongfulness; whether disputes are about legality, about the merits of decisions, or complaints about maladministration; whether disputes are about facts, points of law, or the exercise of discretion; the type of power used by the public body; whether a decision is polycentric; the nature of remedies likely to be seen as sufficient; the gravity of an uncorrected error; the volume of decision-making required; and whether professional expertise is required.¹²² Adler's account of grievances is also a useful starting point. A general level account will only take us so far too, as policy and administrative contexts will vary. But the Settlement Scheme shows us clearly the need for further thinking along these lines. At

¹¹⁷ A consequence could be that a challenge triggers distinct principles of structural fairness, see: *The Lord Chancellor v Detention Action* [2015] EWCA Civ 840 [27]; Frederick Powell, 'Structural Procedural Review: An Emerging Trend in Public Law' [2017] JR 83.

¹¹⁸ For an overview and examples, see: Administrative Justice and Tribunals Council, *Developing principles of administrative justice* (2010); Administrative Justice and Tribunals Council, *Principles of administrative justice* (2010).

¹¹⁹ See e.g. Jeff King, *Judging Social Rights* (CUP 2012) Ch. 3.

¹²⁰ Bondy and Le Sueur (n 115). See also: Dave Cowan, Abi Dymond, Simon Halliday, and Caroline Hunter, 'Reconsidering Mandatory Reconsideration' [2017] PL 215.

¹²¹ Bondy and Le Sueur (n 115), 37 (where this is stated as their seventh design principle).

¹²² Ibid, 54-55.

present, the template underpinning the Scheme is effectively incomplete: generating risks to individuals without appropriate thought being given to safeguards.

5. The Precautionary Principle

The analysis of the EU Settlement Scheme presented in this article demonstrates how the Scheme operates on the basis of a new, distinct template for administration, which is heavily reliant on digital technology and particularly rule-based automation. Overall, for those who get positive outcomes under this Scheme, they will likely get their positive outcomes more quickly. This could be a great benefit, reducing the significant problems associated with waiting and delay. It may also reduce overall administration costs for the government and, in turn, the taxpayer. For those who do not get positive outcomes, however, their fall is less likely to be protected by effective redress mechanisms. The possibility of new types of automation-related grievances must also be grappled with. The Scheme therefore raises a series of questions about justice in an increasingly digital administrative state. Many important questions raised here either remain completely unanswered or only deeply unsatisfactory answers are available. Given the impact that an incorrect immigration decision (and other types of administrative decisions) can have on the lives of individuals and families, and the aggregate impact they have on wider society and the economy, this state of affairs should force us to be cautious about the appropriateness of the further deployment of the Scheme's underlying template, at least without substantial revision. The matter therefore arises about how we should go about revising the extant template.

The options for amendment in the particular instance of the EU Settlement Scheme are multiple. They include, but are not limited to, the following: making the Scheme declarative not constitutive; providing all EU citizens and their family members granted settled status with physical, not digital proof of status; including tax credits in the input data for the automated checks process; and removing the deadline for the Scheme. The list could go on. Assessing the appropriateness of any proposed amendment involves a complex judgement engaging trade-offs, and this article is not the place for a full examination of each possible option. Instead, my claim in this respect goes to how we should approach this matter more generally: that amendments to the template ought to be formulated, debated, and proposed in light of the precautionary principle.

The precautionary principle is an ethical and decision-making principle, which came to prominence in the context of environmental regulation but is increasingly

used in legal regulation in various contexts.¹²³ The ‘essence’ of the principle was recently said by the Court of Appeal to be that ‘measures should be taken, where there is uncertainty about the existence of risks, without having to wait until the reality and seriousness of those risks becomes fully apparent.’¹²⁴ Similarly, the High Court has recently observed that ‘the State does not have to await the accrual or manifestation of actual harm before acting and it can act to forestall that adverse eventuality. As a matter of logic there is no reason why good government should not involve precautionary measures in a range of different policy fields.’¹²⁵ This article has articulated, in precise terms, a series of clear and significant risks associated with the template underpinning the Scheme, finding little existing evidence of such a system’s effectiveness and safeguards that appear weak.

Compounding this position is the meagre evidence being made available about the impacts of the Settlement Scheme due to the poor data collection and publication operation being carried out by the Home Office. One of the potential advantages of the wider use of digital technology in public administration is the opportunity for more granular data to be assimilated more quickly, allowing feedback to be picked up and transparency of the effect of systems. On a routine basis, the Home Office is only publishing a very limited set of statistics on the Settlement Scheme, which it describes as ‘high-level’ information. This data, provided through monthly releases and quarterly statistics, only tells us: the number of applications received and the number concluded, which are broken down by UK nation (England, Scotland, Wales, and Northern Ireland); the nationality of applicants; and whether an application was granted settled status or pre-settled status, or led to some ‘other outcome.’ While additional data was promised in the form of quarterly statistical releases, these only add a breakdown of applications by local authority area, applications and awards for settled status, pre-settled status and ‘other outcome’ by broad age groups (under 16, 16–64 and 65 or over), the 10 most common EEA nationalities, and non-EEA nationalities. This ultimately provides extremely limited analysis of how the Scheme is working and being experienced. It allows the public to understand general grant rates and macro-level trends, but little more. There are also unhelpful ambiguities in the data. Notably, the ‘other outcome’ category is so broadly defined it could represent nothing to worry about or serve to conceal severe problems.¹²⁶ Other evidence is only being made public drip by drip, including through Freedom of Information Act

¹²³ Timothy O’Riordan and James Cameron (eds), *Interpreting the Precautionary Principle* (Routledge 1994).

¹²⁴ *R. (Langton) v Secretary of State for Environment, Food and Rural Affairs* [2019] EWCA Civ 1562 [53].

¹²⁵ *R. (EU Lotto Ltd) v Secretary of State for Digital, Culture, Media and Sport* [2018] EWHC 3111 (Admin) [89].

¹²⁶ It is defined as ‘any outcome that did not result in a grant of leave because the application was withdrawn by the applicant, was invalid as it did not include the required proof of identity and nationality or other mandatory information, or was void because the applicant was ineligible to apply.’

requests, the questioning of Home Office Ministers in Parliament, and even Advertising Standards Authority determinations.¹²⁷ Basic data errors – including the double counting of applicants – means what data is available has even further limited utility.¹²⁸ All of this is far from the dreams of big data leading to transparent and better government – it is clear that the Home Office is collecting more data than it is sharing. As a result, it is making the EU Settlement Scheme a site of data asymmetry, where technology has improved the knowledge of administrators while leaving everyone else in the dark about the system's impacts.

My case for framing our continuing debate around automated administrative systems such as the Settlement Scheme by reference to the precautionary principle is not intended to perpetuate an approach to law and administration which is often driven (if only ambiguously) by fear of the state's capacity to harm the public rather than the state's ability to contribute to societal flourishing. Thought about the state has been imbued with fear since early modern political theory¹²⁹ and contemporary thought on the administrative state is still prone to such tendencies, typically now by talking in terms such as 'risk management.'¹³⁰ We should be appropriately skeptical about such framings. So too should we be skeptical about applying the precautionary principle where it is not justified.¹³¹ However, it is the contemporary conditions of automated decision-making in the systems such as the EU Settlement Scheme – which essentially amount to a giant experiment in administrative justice involving individual citizens and about which we have little evidence of effectiveness – that warrants a proactive risk minimisation framework. There may well be a point in the not too distant future – indeed, I hope there is – where it could be argued that the precautionary principle is redundant in this context, where we have clear evidence that we have refined automated administrative systems with sufficient confidence to focus more on their ability to enable the state to pursue policy in the public interest, while having to worry a little less about injustice for individuals. It requires a great deal of faith – too much – to conclude we are already at that point.

Finally, there is a need to define the precise form of the precautionary principle that is appropriate for this context. Neil Mason suggests that a precautionary

¹²⁷ Complaint Ref A19-567176 (28 August 2019), where it was revealed that '73 per cent of applicants did not have to submit any documents as evidence of their residence'. In other words, 73% of decisions at the point of the ASA determination were essentially automated decisions.

¹²⁸ Bethan Staton, 'Double counting could make UK settled status statistics 'meaningless'' (*Financial Times*, October 27 2019).

¹²⁹ See e.g. Thomas Hobbes, *Leviathan* (first published 1651, Penguin 2019).

¹³⁰ See e.g. Elizabeth Fisher, *Risk Regulation and Administrative Constitutionalism* (Hart 2010). More widely, see: Ulrich Beck, *Risk Society: Towards a New Modernity* (SAGE 1992).

¹³¹ There is a broad literature critiquing the principle, see e.g. Cass Sunstein, *Laws of Fear: Beyond the Precautionary Principle* (CUP 2009).

principle's basic structure has three essential elements.¹³² The first is the *damage condition*, which specifies why precaution is warranted. The second is the *knowledge condition*, which sets out the state of knowledge as regards the activity and its effect. The third is the *remedy*, which defines the action that decision-makers ought to take. Adopting this approach in the context of rule-based automated administrative decision-making systems – and in view of the analysis elaborated in this article in respect of the EU Settlement Scheme – an appropriate precautionary principle may be formulated in the following terms: given the range of risks associated with rule-based automated decision-making systems, until there is further public evidence and clear data on the impact of such systems, they should be incrementally developed and clear safeguards, including public redress processes and monitoring systems, should be in effect.

¹³² Neil A. Manson, 'Formulating the Precautionary Principle' (2002) 24 *Environmental Ethics* 263.