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Challenging a 'Hurt First, Fix Later' Algorithmic System: Is the Tort of Negligence a Regulatory Solution?

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Abstract

The use of algorithmic systems to identify suspected welfare fraud in the Netherlands, India, Australia, and the UK has led to mounting concerns that governments are taking a 'hurt first, fix later' approach to the adoption of algorithmic systems that will impact many of the poorest and most vulnerable members of society. The question this article addresses is one of effective regulation. While various strategies have been explored to tackle challenges arising from the adoption of algorithmic systems in welfare fraud investigations in recent years, this article follows the approach adopted by the applicants in the *Robodebt* class action in Australia in proposing the tort of negligence as a source of common law regulation in the era of algorithmic systems. First, it explains why a duty of care offers a principled and practical answer to the challenges posed by the misuse of algorithmic tools in welfare systems. Second, it argues that, drawing on the reasoning in two well-known English cases of the 1970s, *Home Office v Dorset Yacht Co Ltd* and *Dutton v Bognor Regis*, the common law of negligence can provide a strong foundation for recognising such a duty. Finally, it considers two significant challenges to the proposal and argues that, despite these challenges, the tort of negligence offers a valuable opportunity to enhance fairness, legitimacy, and equity in both system design and regulatory practice, while also mitigating litigation risks.

Keywords: Algorithmic tools; welfare fraud investigation; tort of negligence; duty of care; design and operation.

1. Introduction

The adoption of computerised welfare fraud control initiatives by various governments around the world has sparked heated debates in the past few years.[1] The central concern is the potential violation of welfare recipients' rights, as these initiatives are often pursued with zealous enthusiasm for enhancing efficiency and effectiveness, and may have overlooked some critical legal and ethical considerations. In many welfare states, the adoption of technological advances in welfare fraud investigations has led to public outrage, legal cases and other inquiries, and eventually the (partial) winding-up of the heavily invested-in control initiatives.

Yet, despite these lessons, the UK government has been identified as one of the latest enthusiasts for using algorithmic tools to police welfare recipients,[2] potentially providing a model for other jurisdictions, Australia included. According to the Department for Work and Pensions (DWP):

> In May 2022 DWP set out its high-level plan to tackle fraud and error following the pandemic in Fighting Fraud in the Welfare System. This includes £895 million of additional investment over the three years to March 2025 in counter-fraud

[1] See e.g., Bachelet, "Human Rights"; Special Rapporteur, Extreme Poverty and Human Rights; Eubanks, Automating Inequality.
[2] E.g., Big Brother Watch, Suspicion by Design; Department for Work and Pensions, Annual Report and Accounts 2017-2018.

> staffing, advanced data analytics, and a project to review millions of Universal Credit claims. DWP estimates that this investment will lead to £9.4 billion of savings over five years by reducing fraud and error.[3]

However, there is a perception that those policies are being pursued on a 'hurt first, fix later' basis.[4] Some earlier findings may have fuelled public distrust on the government use of algorithmic tools in welfare systems. For instance, investigations by Big Brother Watch found structural issues including '[e]xcessive, black box data processing, secretive risk-scoring, proxy variables for protected characteristics, and arbitrary risk targets.'[5] Their further investigation based on data obtained through Freedom of Information (FOI) revealed that DWP wrongfully flagged over 200,000 recipients for possible fraud or error.[6]

While the inquiry conducted by the UK Information Commissioner's Office (ICO) has suggested that 'there was no evidence to suggest that people in the benefits and welfare system are subjected to any undue harm or financial detriment as a result of the algorithms used,'[7] this did little to allay public anxiety. Concerns persist over the transparency and fairness of these initiatives. Human rights advocates and non-profit organisations have thus called for an immediate end to these initiatives, as well as more dedicated efforts to 'work closely with actual users so that automation works for people rather than against them.'[8]

The question this article addresses is one of effective regulation. While various strategies have been explored to tackle challenges arising from the adoption of algorithmic systems in welfare fraud investigations in recent years,[9] this article follows the approach adopted by the applicants in the *Robodebt*[10] class action in Australia in proposing the tort of negligence as a source of common law regulation. In short, it argues for a fresh engagement with the law of negligence to allow it to (better) take on this regulatory function. It does not seek to map every contour of the law of negligence.[11] Its purpose is more direct: to explore how this branch of the common law can be harnessed to prevent and mitigate the harms that may flow from implementing algorithmic tools in welfare systems. It focuses on two aspects that bear upon the duty of care owed by public authorities. The first is the need to mark, with precision, the line between policy and operation.[12] The second is whether that duty should reach into the design process itself, given the commanding role that system design plays in the operation.

The discussion proceeds in three steps. First, it examines the tension between the UK government's use of algorithmic tools in the welfare system and the public's fear of the harm such tools may cause, arguing that the imposition of a common law duty of care offers a principled and practical way to address this conflict. Second, recognising the complexities of welfare fraud investigations aided by technological advances, it focuses on two aspects of that duty: the line to be drawn between policy and operational matters, and whether the duty of care should extend to the design process. Drawing on the reasoning in analogous English cases of the 1970s dealing with public authority liability, as well as the Australian *Robodebt* case itself, it contends that the law of negligence potentially provides a solid foundation for both considerations. Finally, it considers two significant challenges to the proposal of imposing a duty of care and argues that, despite these challenges, the tort of negligence offers a valuable opportunity to enhance fairness, legitimacy, and equity in both system design and regulatory practice, while also mitigating litigation risks.

2. Why is Imposing a Duty of Care on Government Use of Algorithmic Tools in Welfare System a Potential Solution?

The debate over governmental embrace of algorithmic tools in welfare systems, and the public's fear of a 'hurt first, fix later' approach to their design and operation, reflect a long-standing dilemma between state and citizen: what can the public

[3] House of Commons Committee of Public Accounts, The Department for Work and Pensions, 5.
[4] Booth, "Revealed."
[5] Big Brother Watch, Poverty Panopticon, 39.
[6] Lord Clement-Jones, Public Authority Algorithmic; Booth, "DWP Algorithm Wrongly Flags 200,000."
[7] Department for Works and Pensions, Annual Report and Accounts 2022-23, 179.
[8] Booth, "DWP Algorithm Wrongly Flags 200,000."
[9] Such as a legislative approach, see e.g., Lord Clement-Jones, Public Authority Algorithmic; and strategic human rights litigation, see e.g., *NJCM et al. v The Dutch State*.
[10] In this article, 'Robodebt' is italicised only when cited as a court case.
[11] Nor does it seek to deal with procedural aspects of class actions that include negligence claims: but see (as to class actions or representative claims generally) *Lloyd v Google LLC* [2021] UKSC 50; *Prismall v Google UK Ltd and DeepMind Technologies Ltd* [2023] EWHC 1169 (KB), affd. [2024] EWCA Civ 1516.
[12] Note that, as this article's focus is negligence not intention, it does not seek to rely on the deliberate character of choice made in the 'systems, policies and practices' of entities that cause harm as eliding the need to distinguish between policy choices and operational aspects, as argued interestingly by Julia Powles in Powles, "The Corporate Culpability," 100, citing Bant and Paterson, "Systems of Misconduct," 72-75.

legitimately expect from government? As Greg Weeks has observed, disputes over legitimate expectations expose the fault lines between 'promise,' 'policy,' and 'practice.' A promise made by the government creates public expectations about what a policy should be and how it will be enforced. Yet policy is rarely shaped solely by public expectations; governments may hold different views about legitimacy and adequacy in policy making and enforcement, and what is reasonable for the public to expect. When these two perspectives collide in practice, conflicts follow.[13] The introduction of science – whether natural or computational – into the policy mix can add further risk and uncertainty, and with it, unintended consequences that exacerbate the tension.

The policy of using algorithmic tools in welfare systems is justified by appeals to public interest. Welfare payments account for a significant portion of national expenditure in many states,[14] and governments have long been concerned that fraud and error could undermine the concept of social protection and bring national economies to a standstill. Consequently, welfare fraud investigation has been a policy priority for decades.[15] From a technical standpoint, the design and operation of these tools draw on a tradition of state involvement in social control dating back to the birth of welfare state. Two strategies dominate: prevention, through stringent means-testing of recipients; and detection, through physical and data surveillance. In both strategies, the processing of welfare recipients' information and the decisions that follow are central.[16] Public administration has also long sought to use technical innovation to enhance the efficiency and accuracy of these processes.[17]

This historical and technical backdrop explains the government's enthusiasm for applying technological advances to conduct welfare fraud investigations, and why, as noted in a recent UK report on algorithmic accountability,[18] data-matching and risk-scoring have become dominant techniques. While calls for greater transparency in fraud control – particularly when technologically assisted – are compelling, high-level disclosure of design and operational details remains rare, constrained by competing public interest considerations.[19]

From the perspective of public expectation, however, the fear of a 'hurt first, fix later' mentality in the design and operation of algorithmic tools – and the consequent demands for transparency, participation, and reform – appears well-founded. It draws on not only deep-seated concerns about the treatment of the 'undeserving poor'[20] and emerging controversies such as the DWP wrongly flagging recipients for possible fraud or error, but also harsh lessons from other jurisdictions over the past decade.

For example, the Royal Commission into the Robodebt scheme in Australia found that the program was poorly designed, based on a narrow data sample,[21] and riddled with operational errors.[22] While the burden of proof was shifted onto welfare recipients, communication with compliance officers was replaced by online portals.[23] Many recipients suffered profound and lasting distress, trauma, anxiety, and mental ill-health from being wrongly accused or threatened, losing faith in government.[24]

Comparable controversies have arisen in other welfare states. In the Netherlands, the SyRI project drew sharp criticism for intrusion of privacy and its chilling effect on access to social rights.[25] In India, the Aadhaar system faced similar scrutiny for extensive privacy intrusions and the creation of new barriers to essential entitlements.[26]

[13] Weeks, "What Can We Legitimately Expect," 147-164.
[14] Issues with public expenditure including welfare payments have been discussed at international forums since the 1970s. See e.g., Bussière, "The Rise in Public Expenditure," 8-14.
[15] See e.g., Lansley, The Richer, The Poor; Katz, The Undeserving Poor; Thatcher, "The Liberal Party of Australia," 10-20; Weatherley, "From Entitlement to Contract," 153-173; Hasson, "The Cruel War," 114-147.
[16] See e.g., Fawcett, "Adaptive Fraud Detection," 291; Bolton, "Statistical Fraud Detection," 235; Wilensky, "Rich Democracies," 322.
[17] See e.g., Westin, "Privacy and Freedom"; Burnham, "The Rise of the Computer"; Greenberg, "Using Computer to Combat Welfare"; Lyon, "Surveillance Society"; Gilliom, "Welfare Surveillance," 199-217.
[18] See e.g., Currie, Algorithmic Accountability in the UK.
[19] Additionally, in the context of public-private partnerships developing algorithmic tools, proprietary commercial interests can significantly impede comprehensive disclosure.
[20] See e.g., Lansley, The Richer, The Poor, 30-38.
[21] Commonwealth of Australia, Royal Commission into the Robodebt, 433.
[22] Commonwealth of Australia, Royal Commission into the Robodebt, 169-173.
[23] Online participation is excluded only when welfare recipients are legally blind, deceased, or received less than the assigned minimum welfare payment amount. See Deloitte, The Use of Data, 17.
[24] Commonwealth of Australia, Royal Commission into the Robodebt, 330-341.
[25] See details in *NJCM et al. v The Dutch State*; United Nations Special Rapporteur, "Brief … as Amicus Curiae in NJCM," [8]; van Bekkum, "Digital Welfare Fraud Detection," 323.
[26] See details in *Justice K.S. Puttaswamy (Retd.) & Anr. v. Union of India & Ors* (2019) 1 SCC 1; Khera, Dissent on Aadhaar.

The lessons from these cases are unlikely to reassure the public when the UK deploys algorithmic tools in its welfare system. In each, public perception has been shaped not by the promise of efficiency, but by the experience of exclusion, intrusion, and harm. The use of technological advances – though intended to enhance efficiency and effectiveness – ultimately exacerbated power imbalances or converted a reciprocal regulatory relationship into a one-way projection of authority, causing significant social unease and, for some welfare recipients, devastating consequences.

Facing such complexities, imposing a duty of care via the prospect of liability in negligence will offer a potential solution to address the persistent gaps between promise, policy, and practice. Social and regulatory norms suggest that the tension arising from the UK government's use of algorithmic tools in the welfare system will not abate on its own. The government must therefore adopt mechanisms capable of reducing this tension before it erodes public trust and squanders significant investment. History offers cautionary tales: the UK's two 'AI winters'[27] and the public backlash against innovations in genetic,[28] biotechnological,[29] neurotechnological,[30] and data exploitation domains.[31] The pattern is clear – novel technologies, when used in the exercise of public power, can provoke fierce antagonism if their risks are not anticipated and managed.

Taking reasonable care is also what the public administration aims to achieve in the use of algorithmic tools in welfare systems.[32] In the public sector, the goal of implementing algorithmic tools is to replicate and assist human decision-making with greater efficiency, while avoiding adverse outcomes. Design and operation must also take account of human capacities for risk prevention and uncertainty management, especially given that decisions made by these systems often affect millions. In the long term, these tools should serve to empower society, enabling a more participatory and human-centred digital transformation.[33] They must therefore be designed and operated with care, never producing consequences so shocking that they damage public trust or undermine transparency and accountability.

Therefore, imposing a duty of care may be not only a potential solution, but also one of the most rational and economically sound options for achieving success in the government implementation of algorithmic tools in welfare systems. It would help ensure that the inevitable gaps between promise, policy, and practice do not erode public confidence or dampen the enthusiasm for harnessing technological advances. Where taking reasonable care is made into a legal obligation in the implementation of algorithmic tools, this offers clarity and certainty not only to welfare recipients but also to government agencies.[34] The decision of whether or not to take reasonable care would no longer rest on the discretion of designers and operators, but would be mandated by law. Those who exercise regulatory power for the public good would benefit from clearer legal boundaries, which in turn might enable them to discharge their duties without undue fear of litigation.

3. Analogous Cases on Liability of Public Authorities: Operation and Design

In the context of government use of algorithmic tools in welfare systems, two aspects are of preliminary importance for imposing a duty of care. One is to draw explicit boundaries between policy consideration and operation,[35] and the other is to decide whether the imposition of a duty of care should extend to the design process. As Lord Bingham has observed, the challenge for law is 'to identify those kinds of undesirable behaviour which should give a right to compensation to those who suffer as a result.'[36] This challenge in the current context is heightened: software stands between the government and welfare recipients, turning direct regulation into 'indirect regulation' which often 'misdirects responsibility.'[37] The preliminary task, therefore, is not simply to identify 'undesirable behaviour,' but to pinpoint the procedures in which reasonable care should be applied, and to draw on case law analogies to justify these considerations.

[27] See relevant discussion on 'AI winter' in e.g., Select Committee on Artificial Intelligence, AI in the UK, 16-19.
[28] See e.g., Nuffield Council on Bioethics, Genetically Modified Crops.
[29] See e.g., Nuffield Council on Bioethics, Emerging Biotechnologies.
[30] See e.g., Nuffield Council on Bioethics, Novel Neurotechnologies.
[31] See e.g., Nuffield Council on Bioethics, The Collection, Linking and Use.
[32] See e.g., Administrative Review Council, Automated Assistance in Administrative Decision, 27; Commonwealth Ombudsman, Automated Decision Making, 4.
[33] See e.g., Independent Panel, Our Public Service, 145; 248-258.
[34] Resonating with the UK Government's response to the proposed digital duty of care on platforms, the duty of care discussed in this article likewise seeks to be proportionate and to foster a stable, predictable regulatory environment, rather than creating a chilling effect on innovation. See UK Parliament, Government Responses, 1.
[35] While acknowledging that separating policy considerations from operational matters does not, in itself, fully justify imposing a duty of care, such a distinction at least opens the way for judicial scrutiny of possible negligent conduct occurring in the course of operations.
[36] Lord Bingham, Lives of the Law, 270.
[37] See the discussion on 'indirect regulation' in Lessig, Code: Version 2.0, 133.

This section points to two well-known English cases of the 1970s dealing with the liability of public authorities, *Home Office v Dorset Yacht Co Ltd*[38] and *Dutton v Bognor Regis*,[39] as showing that courts can use negligence to address novel situations by adopting an extended approach to their judicial reasoning. In the first case, the court drew boundaries between policy and operation in determining liability for negligence; in the second, the court held that the design of a system is an aspect of its operation, so can lead to liability for any harms that result from negligence in design. The significance of the reasoning in these cases lies not only in expanding the nuanced contours of legal principles but also in revealing judicial intent – shedding light on why judges deemed a shift in the law necessary. Finally, this section turns to the Australian *Robodebt* class action – which was ultimately settled without a final conclusion on the issue of negligence liability – to illustrate recent developments in common law negligence and its growing relevance to the public administration's adoption of algorithmic initiatives.

3.1. Drawing Explicit Boundaries between Policy Consideration and Operations: Home Office v Dorset Yacht Co Ltd

To address the duty question in assessing whether public authorities have been negligent in their adoption of algorithmic systems, it is argued, firstly, that contrary to some recent authorities, the distinction between policy considerations and operations serves as a useful functional distinction within the digital design space. Secondly, and more conventionally, it is necessary also to identify whether foreseeable negligent conduct is involved in relevant operational aspects, which would justify the imposition of a duty of care on public authorities' use of algorithmic systems. While the debate on the liability of AI systems has been active for over a decade,[40] surprisingly little attention has been paid specifically to these two elements.

The decision of the House of Lords in *Home Office v Dorset Yacht Co Ltd* ('*Dorset Yacht*') offers valuable insights into the first of these issues. This case is commonly regarded as 'the first of modern attempts' to establish explicit legal principles on the negligence liability of public authorities.[41] On the first point, the policy defence in this case rested on the arguments that the purpose of reducing control of the prisoners was to train them to develop social responsibility and become good citizens, and therefore any resulting harm was merely a consequence of imperfect considerations in policymaking. However, the court held that while the open management of the Borstal Institution was a matter of policy, authorities were required to exercise due care in training, disciplining and supervising the boys. The discharge of these duties was not a policy consideration but an operational function. As Lord Reid specified, '[t]here is all the difference in the world between a calculated act of policy in letting a boy out on parole and sheer negligence in not keeping him in.'[42] On the second point, the court held that the three officers who were responsible for supervision went to bed and left the boys roaming at large, thereby failing to perform their duty of disciplining and controlling the boys. The conduct occurred during the discharge of such duties and gave rise to liability in negligence for the authority.[43]

The practical deployment of algorithmic systems to control welfare fraud fits the operational category identified in *Dorset Yacht*. Decisions made to deploy algorithmic tools in welfare systems are generally considered a public policy matter, and governments retain full authority over all critical decisions throughout the process. But, if the task of negligence liability is to determine whether harm has been caused by a breach of a duty to take reasonable care – and, in this context, whether such a duty should be imposed on public authorities in their use of algorithmic systems – the regulatory implications of the reasoning in *Dorset Yacht* are clear.[44] The policy-operation boundary articulated in this case serves not as a blunt instrument, but as a functional scaffold for incremental legal development, enabling courts to respond to novel challenges without abandoning the discipline of established negligence principles.

In the context of applying algorithmic tools in welfare systems, while it is a policy consideration to employ these tools to enhance regulatory efficiency and effectiveness, both the processing of welfare recipients' information and subsequent decision-making are operational procedures. Furthermore, although the control of welfare fraud is in the public interest, no

[38] *Dorset Yacht Co Ltd v Home Office* [1969] 2 QB 412, CA; affd. *Home Office v Dorset Yacht Co Ltd* [1970] AC 1004, HL.
[39] *Dutton v Bognor Regis Urban District Council* [1972] 1 QB 373.
[40] See for instance, there has been discussion on utilising law of negligence to conduct procedural examinations. See e.g., Cauffman, "Robo-Liability," 527-532; Hubbard, "Allocating the Risk," 34-37. On the other hand, many authors expressed deep concerns on whether negligence remains an effective means to regulate the use of AI systems, see e.g., Selbst, "Negligence and AI's Human Users," 1321; Yoshikawa, "Sharing the Costs," 1155.
[41] Fairgrieve, The Negligence Liability, 1.
[42] [1970] AC 1004, HL, 1012.
[43] While the Court of Appeal settled the law on these two points, the decisions were affirmed by the House of Lords.
[44] Noting though the courts in the past decades have less often relied on the distinction between policy and operations to reach decisions. See e.g., *Hill v Chief Constable of West Yorkshire* [1989] AC 53; *Robinson v Chief Constable of West Yorkshire Police* [2018] UKSC 4; see the more detailed discussion in Section Four.

legal provision expressly stipulates that public authorities do not need to take reasonable care during the operation of computerised regulatory initiatives. Often, and perhaps inevitably, there will be instances where decisions are made based on inaccurate information, as issues resulting from inaccurate data or flawed algorithms have repeatedly demonstrated. If a 'hurt first, fix later' mentality informs policy and operation in such circumstances, it not only creates foreseeable negative consequences for welfare recipients but also reflects a conscious choice to disregard them until rectification becomes necessary.

3.2 An Architecture Authorised by the Public Authorities: Dutton v Bognor Regis UDC

When algorithmic systems are used in welfare fraud investigations, equally important is the reasonable care to be taken during the design of the system. To justify the expansion of the duty of care to the design process, it is useful to look to the reasoning of the English Court of Appeal in *Dutton v Bognor Regis Urban District Council* ('*Dutton*').[45] This case dealt with an *entirely* novel situation and has been regarded as 'one of the most important of modern times' and 'the precursor to many developments' as it encapsulates all the crucial elements of the expansion of negligence liability for public authorities.[46] As stated in *Anns v Merton London Borough Council* ('*Anns*'), *Dutton* was the first case 'where a public authority upon whom lay a statutory duty had been held to be under a positive duty to exercise those powers in such a way as to safeguard them from a harm which was different from the public purpose which the Act was designed to avoid.'[47]

Notwithstanding that the decision's position on recovery of pure economic loss has been overturned, two aspects of the court's reasoning remain relevant to contemporary challenges: first, its reasoning on the imposition of the duty of care on public authorities; and second, the legal position of inspectors in such cases. On the first point, while the statute merely described the council's role as a 'function' – which could be interpreted as either a 'power' or a 'duty,' Lord Denning held that 'function' in this context meant 'control.' Moreover:

> … the control thus entrusted to the local authority is so extensive that it carries with it a duty. It puts on the council the responsibility of exercising that control properly and with reasonable care. The common law has always held that a right of control over the doing of work carries with it a degree of responsibility in respect of the work.[48]

The legislature had entrusted public authorities with significant control over planning and construction, and it was this 'control' that gave rise to a duty: the duty to exercise their control with reasonable care, including ensuring compliance throughout all relevant procedures.[49]

On the second point, the defendant argued that the inspector was a professional expert who merely provided advice and, therefore, owed a duty only to those who employed him. Lord Denning rejected this argument, drawing a sharp distinction between two types of professional experts. On the one hand, those who provided advice on financial or property matters owed a duty solely to their clients. On the other hand, those 'who gave advice on the safety of buildings, or machines, or material' owed a duty to all who might suffer harm as a result of their advice.[50]

Much can be learned from the above two aspects when addressing issues posed by public authorities' adoption of algorithmic tools in welfare systems. First, when welfare fraud investigations are aided by technological advances, they frequently create a situation where public authorities have absolute control over the entire process, while welfare recipients have little recourse. Furthermore, the architecture of an algorithmic system is often used to govern the entire operation. In contrast to manual operations, where the number of welfare recipients that will be affected by a regulatory scheme depends on administrative staff capacity, algorithmic systems, once implemented, can take immediate action that affects millions. Given their vast and instantaneous impact, it is plausible to address issues arising from the design defects as a matter of negligence liability. *Dutton* here offers useful reasoning. Applying and extending this to the present context, it can be argued that the control entrusted to public authorities is so extensive that they should have a duty to 'exercise the control properly and with reasonable care' in both the design and the operation of algorithmic systems.

The purpose of imposing this duty to take reasonable care aligns with the broader logic of *Dutton*: not to hinder the work of public authorities in developing and using algorithmic systems or to create a chilling effect on innovation, but rather to ensure that the systems function more effectively. More precisely, it seeks to balance the efficiency and effectiveness of welfare fraud

[45] [1972] 1 QB 373.
[46] Lord Denning, The Discipline of Law, 255-269.
[47] [1978] AC 728, HL, 734-735.
[48] [1972] 1 QB 373, 392.
[49] [1972] 1 QB 373, 391-392.
[50] [1972] 1 QB 373, 395.

investigations while grounding decisions in evidence and proper oversight, thereby upholding procedural fairness and managing litigation risks for public authorities.

3.3 Judicial Advances from the Australian Jurisdiction: The Robodebt Case

While the English cases from half a century ago were not concerned directly with the question of liability for negligence in the development and use of AI systems, the Australian *Robodebt* case deals more specifically with the adoption of algorithmic tools in welfare systems. As such, it offers valuable judicial and technical insights. While the case was ultimately settled,[51] the court proceeding and the subsequent Royal Commission further underscore the need for imposing a duty of care on public authorities who use algorithmic tools in welfare systems.

First, the *Robodebt* court proceedings highlighted the current regulatory norms in the context of adopting technological advances to achieve regulatory objectives. Although Justice Murphy expressed doubt that the applicants could establish the alleged duty of care,[52] his Honour nonetheless condemned the government, declaring that they 'completely failed in fulfilling [their] obligation.' His Honour also emphasised the stark power imbalance between the parties, noting that welfare recipients were entirely powerless during the government operation of the scheme.[53] Establishing the duty of care in this case proved challenging, given the trajectory of judicial developments of relevant principles in Australia over recent decades.[54] Nevertheless, his Honour's perspectives on 'obligation' and 'power imbalance' resonate with Lord Denning's analysis of 'control' as a crucial link between 'power' and 'duty' in *Dutton*.

Second, while the court's argument was not centred on the analysis of technology, it addressed specifications that could facilitate the integration of technical details into judicial reasoning. Notably, the issue of the policy-operation distinction, which sometimes troubles the court in assessing negligence claims against public authorities,[55] was not a point of contention here. The applicants made clear that their claim of a duty to exercise reasonable care concerned only the operation of the scheme, including the processing of welfare recipients' information and all subsequent conduct.[56] In other words, the applicants did not challenge the underlying policy considerations of implementing algorithmic systems to assist with welfare fraud investigations.

As for proving the 'actual knowledge' in the negligence claim, the court's evidentiary standard was also precise. During the hearing of the Commonwealth's application for leave to appeal, Justice Lee emphasised that applicants should provide evidence that is (1) reflective,[57] (2) 'an actual persuasion of its occurrence or existence before it can be found,' and (3) 'a definite conclusion affirmatively drawn of the truth,'[58] rather than relying solely on inferential reasoning. These requirements bring judicial scrutiny one step closer to the algorithms underpinning the system – condition-action rules made prior to implementation but ultimately shaping its entire operation.[59] Furthermore, in defining the scope of an effective evidentiary search, the court also focused on identifying misconduct in the defendant's operational practices.[60]

Finally, a thorough examination of the design of the Robodebt scheme has revealed how the design of an algorithmic system can affect its entire operation, including difficulties with communication among all relevant actors.[61] While communication and collaboration are essential to evidence-based welfare fraud investigations, the design of the Robodebt scheme followed the 'waterfall methodology,'[62] which is a linear, sequential framework, where each phase is completed before proceeding to the

[51] Noting that Gordon Legal – the law firm which brought the Robodebt class action litigation in 2019 – appealed the class action settlement in September 2024 to make a fresh claim of a tort of 'misfeasance in public office,' seeking further compensation on behalf of victims. On 4 September 2025, the case has settled for a record breaking $548.5 million, subject to Court approval. The new settlement amount is in addition to the total amount awarded in previous proceedings concluded in June 2021. See Karp, "Robodebt Victims"; Jervis-Bardy, "Robodebt Victims Win."

[52] Given *Prygodicz v Commonwealth of Australia (No 2)* [2021] FCA 634 was a settlement proceeding, the court did not explore the negligence claim in full legal details. The restitutionary claim for unjust enrichment effectively grounded relief in the settlement.

[53] [2021] FCA 634 at [5]-[11].

[54] See relevant discussion of this trajectory in 4.2.

[55] See a comprehensive discussion of this issue in Fairgrieve, The Negligence Liability, Chapter 2.

[56] [2021] FCA 634 at [172].

[57] *Commonwealth of Australia v Prygodicz* [2020] FCA 1516 at [21]. Lee J cited Bowen LJ 'the state of a man's mind is as much a fact as the state of his digestion.'

[58] [2020] FCA 1516 at [21].

[59] See Lord Sales's discussion on algorithms: 'An algorithm is a process or set of rules to be followed in problem-solving. It is a structured process. It proceeds in logical steps …' in Lord Sales, "Algorithms, Artificial Intelligence," 47.

[60] [2020] FCA 1516 at [9].

[61] Deloitte, The Use of Data.

[62] Senate Finance and Public Administration References Committee, Digital Delivery of Government Services, 101.

next, with little scope for revisiting earlier stages.[63] While a waterfall design may suffice for regulatory schemes aimed at universal and unconditional distribution, problem-solving within regulatory enforcement requires a more capable system that continuously integrates new information to ensure decisions are adequately justified. In other words, as Justice Murphy commented on the Robodebt scheme, the 'financial hardship and distress caused to so many people could have been avoided'[64] had the Commonwealth designed the computerised welfare fraud investigation system with reasonable care to better engage and communicate with welfare recipients and all other relevant actors.

4. Imposing a Duty for Taking Reasonable Care in the Era of Algorithmic Systems: Challenges and Opportunities

The discussion in preceding sections sought to justify the imposition of a duty to take reasonable care in the context where public authorities adopt algorithmic tools in welfare systems. However, this proposal will foreseeably encounter challenges. As Lord Bingham has cautioned, for the law of negligence, 'every inch of the line has been the subject of fiercely contested litigation.'[65] This section, therefore, addresses two potential challenges that may be raised against the article's analysis: first, that it relies on 'improper' legal authorities, including decisions that have since been overturned; and second, that it does not give sufficient weight to the judicial shift that followed those cases in the law of public authority negligence. These concerns are closely related, as the use of overturned decisions naturally invites questions about judicial developments that came after them.

By engaging with these potential challenges, the section contends that, although adherence to legal authority is fundamental, thoughtful reasoning supports the principled development of the common law. Even in overturned cases, careful attention to their reasoning – through scholarly analysis or persuasive reflection – can illuminate how the underlying rationale may guide responses to novel and complex situations.

4.1 Reliance on Legal Cases

The difficulty of identifying common law principles to justify the imposition of a duty of care in the context of computerised welfare fraud investigation is hardly surprising. As famously observed by Justice Holmes, '[t]he life of the law has not been logic: it has been experience.'[66] While the use of computers in welfare systems has attracted controversy since the 1960s,[67] legal issues concerning the ubiquitous use of technological advances to investigate welfare fraud have only come to the forefront in recent years. Furthermore, although the common law has developed extensively in regulating public authorities, established principles have not yet extended to a situation where algorithms play a dominant role in welfare fraud investigations.

This challenge was evident in the *Robodebt* case. Given that the alleged duty of care 'does not fall within an existing category of known duties,' the court held that an assessment of 'salient features' would assist in determining whether a duty of care could be established but nonetheless noted the low likelihood of success due to the claim's 'novel and untested' nature. Furthermore, in addressing the defendant's reliance on case law concerning the exercise of statutory powers in social welfare decision-making, the court concluded that, although the alleged duty of care was unlikely to be established on the evidence and arguments presented, the rationale for this conclusion was distinct from that of the precedents cited.[68]

Aware of these challenges and the need for clear boundaries in assessing issues arising from algorithm-enabled welfare fraud investigations, this article's approach has been to search for well-reasoned analysis in earlier cases concerning the liability of public authorities. Although the *Dorset Yacht* case's distinction between policy considerations and operations has not been treated as sufficient to determine whether public authorities owe a duty of care in later cases,[69] this article contends that it provides a crucial framework for addressing the complexities of this novel situation. Indeed, this article points to advances in the *Robodebt* case where the applicant clearly articulated concerns about 'operation,' and the judge accepted this as the starting point for analysis of potential negligence liability, specifically the establishment of a duty of care.[70] This article acknowledges that relevant legal principles in this specific context (i.e., delegating administrative tasks to algorithmic systems) are yet to be settled. However, rather than arguing from 'authority,' it takes a step back to highlight the importance of drawing distinctions

[63] See e.g., Wysocki, Effective Project Management, 45; Pressman, Software Engineering, 383-386.
[64] [2021] FCA 634 at [10].
[65] See Foreword by Lord Bingham in Booth, The Negligence Liability, v.
[66] Justice Holmes, The Common Law, 1.
[67] E.g., Westin, Information Technology in a Democracy, 1971.
[68] [2021] FCA 634 at [173]-[183].
[69] See relevant discussion in 4.2.
[70] See relevant discussion in 3.3.

between policy considerations and operations, and to advocate for the establishment of clear legal boundaries in the use of algorithmic systems.

This article refers to the *Dorset Yacht* case not to reinforce its legal authority but to explore the judicial intent and the justifications underpinning the change in law. As previously discussed, this case is regarded as the first of the modern attempts to establish principles for determining the policy-operation distinction and whether a duty of care should be imposed based on the facts as they arise during the operation.[71] While courts in recent decades have been more cautious about relying on the policy-operation distinction when deciding cases,[72] the principles established in *Dorset Yacht* remain instructive, particularly in the face of emerging challenges where the use of technological advances blurs the line between policy considerations and operations.

In a similar vein, this article refers to *Dutton* to justify the argument that a duty of care should extend to the design process, although this case was overruled on the issue of recovery of pure economic loss in *Murphy v Brentwood District Council* ('*Murphy*').[73] Despite its overruling, the reasoning in *Dutton* highlighted several substantive issues, including a power imbalance, the public administrators' absolute control, and the claimant's vulnerability and reliance on the public administrators' decision. While the architecture of algorithmic systems implemented in welfare fraud investigations is often a mystery, the Robodebt Royal Commission demonstrated how system architecture governed the entire operation.[74] As the Commission detailed, despite the vulnerability of welfare recipients, critical decisions regarding welfare recipients' benefit entitlements were placed almost entirely in the hands of automated processes; recipients had little meaningful control over the system operation. In *Dutton*, the litigation was a result of the inspector's negligent inspection and approval of the construction plans. In algorithm-enabled welfare fraud investigations, the flaws that ultimately shaped the operation of an entire regulatory scheme were not incidental but rather design choices sanctioned by public authorities.[75]

In sum, this article maintains that the imposition of a duty of care in the context of algorithm-enabled welfare fraud investigations requires a fresh engagement with the law. The essence of the common law is not found solely in the 'authoritative' legal principles it establishes, but also in the reasoning behind every significant doctrinal shift – whether those precedents have endured or been overruled. It is therefore essential to closely examine contexts and facts – from which analogies may be drawn – alongside an understanding of the legislative intent behind judicial decisions to depart from established principles.

Drawing analogies to existing cases is critical to ensuring that legal developments remain grounded in context, factual realities, and normative considerations, rather than in an unprincipled expansion of liability. The analogies drawn in this article, echoing Lord Stamp in *Dutton*, are 'not complete, but serve(s) to illustrate the point.'[76] The significance of the two UK authorities discussed in this article does not lie in the binary question of whether public authorities should be held liable, but in the factual and contextual circumstances that led judges to recognise the necessity of departing from existing law and formulating new principles. Only by scrutinising these considerations can we assess the continued relevance of the common law and the need for further development in an era shaped by technological advances.

4.2 Judicial Oscillation and the Struggle of Balancing Competing Interests

The second challenge relates to the judicial oscillation in determining whether a duty of care should be imposed on public authorities – an issue that has been a point of contention in the UK since the late 1980s.[77] Far from overlooking this development, this subsection examines the line of cases that displaced the earlier authorities and the pressures that shaped that trajectory. The aim of analysis is not to diminish the authority of later decisions, but to show that the reasoning of earlier cases – even those now overturned – can still cast useful light on how the common law might respond to challenges arising from emerging technologies.

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[71] Fairgrieve, The Negligence Liability, 25.
[72] See the discussion of these developments in section 4.2.
[73] [1991] 1 AC 398, HL.
[74] Commonwealth of Australia, Royal Commission into the Robodebt, 445-494; Deloitte, The Use of Data, 11-24.
[75] Noting here that public authorities may or may not fully aware of risks and uncertainties associated with certain types of design and the operation it governs. It is likely an issue of bounded rationality, which is beyond the discussion of this article.
[76] [1972] 1 QB 373, 410.
[77] See relevant development in *Caparo Industries plc v Dickman* [1990] 2 AC 605, HL; [1991] AC 398, HL; *Stovin v Wise* [1996] AC 923, HL; *Kent v Griffiths* [2001] 2 QB 36, CA; *Larner v Solihull Metropolitan Borough Council* [2001] RTR 469, CA; *Gorringe v Calderdale Metropolitan Borough Council* [2004] 1 WLR 1057, HL; *Michael v Chief Constable of South Wales Police* [2015] UKSC 2; [2018] UKSC 4.

From 1970 to the late 1980s, in leading cases such as *Dorset Yacht* and *Anns*, a duty of care was imposed where negligent conduct in operations could be proved. It was held that policy considerations should not be used to preclude the duty imposition. A two-stage test was proposed in *Anns* to determine whether a duty is owed. However, the period from the late 1980s to the 1990s marked a retreat from the preceding era, driven by emerging concerns that the expansion of the duty of care would result in a flood of litigation, especially in relation to economic losses. Judicial positions in *Anns* were overruled in *Murphy*. Furthermore, a three-stage test (generally referred to as the '*Caparo* test') was summarised in *Caparo Industries v Dickman*[78] and often applied in later cases, setting a stricter threshold for the claimants to establish a negligence claim. In recent years, English courts have increasingly underscored the importance of the 'fair, just and reasonable' approach relating to policy considerations, and framed an incremental approach, drawing on established authorities either by reference or analogy to limit liability.[79] Australian courts, as well as legislatures, have been similarly (and indeed arguably more) circumspect in finding legal liability in negligence for public authorities,[80] in fear of 'the floodgates.'[81] Nevertheless, the lack of legal coherence in this field indicates that even if a court were inclined to impose a duty of care on public authorities in the context of algorithm-enabled welfare fraud investigations, the search for stable principles to justify such an imposition would remain challenging.

Therefore, while legal issues arising from algorithm-enabled welfare fraud investigations appear to be novel, the underlying dilemma is an old one: the quest for balance. In both the UK and Australian contexts, courts have repeatedly struggled to strike a balance – on the one hand, imposing a duty of care to protect those who are affected; on the other, weighing public policy considerations aimed at protecting the public good. The search for this equilibrium has long proved challenging. Once a duty of care is established, it often carries damage claims and compensation as inevitable consequences. Courts, therefore, have been reluctant to impose a duty of care on public authorities in circumstances where such an imposition might result in a waste of public resources or detrimental consequences to the operation of a public function.[82]

However, this article argues that the substantive issues emerging from devastating cases in computerised welfare fraud investigation should outweigh judicial reluctance to extend a duty of care to public authorities. As this article points out, relevant concerns – power imbalance, absolute control of the process, vulnerability, and reliance – are not new, nor are they exclusive to the adoption of algorithmic systems; they have long played an important role in judicial reasoning, as evidenced by cases such as *Dorsett Yacht* and *Dutton* in the UK, and more recently (albeit incompletely) *Robodebt* in Australia. They should continue to do so. To an extent they do. For instance, in the Australian case of *Perre v Apand Pty Ltd*, Gleeson CJ stated that 'knowledge of an individual, or ascertainable class of persons, who is or are reliant, and therefore vulnerable, is a significant factor in establishing a duty of care.'[83] And in the recent environmental harm case of *Minister for the Environment v Sharma*, although the negligence claim ultimately failed, the court acknowledged the factual vulnerability of children to climate change. Rejection of a duty of care in that instance stemmed chiefly from a deluge of technical considerations, including questions of justiciability and the remoteness of harm, as well as the limited control the Minister has over climate harm.[84]

In short, this article argues that a renewed central focus on questions of power imbalance, control of the process, vulnerability, and reliance in assessing a duty of care will revitalise the existing legal framework and shape a more constructive approach to design and operation in an era of algorithmic systems (as in earlier eras).[85] Legal principles articulated by judges within the law of negligence, even if lacking much by way of formal legal 'authority,' can offer valuable guidance in the development of the architecture of algorithmic systems, ensuring reasonable care is taken during the design and operation of the systems.

5. Conclusion

This article responds to the problem of public authorities' implementations of algorithmic tools in the welfare system, particularly the tension between promise, policy, and practice. Accordingly, it seeks to advance the role of common law principles in upholding procedural fairness and the rule of law within algorithmic initiatives. While the discussion primarily addresses the challenges arising from the adoption of algorithm-enabled welfare fraud investigation in the UK, its significance extends also to Australia. By weaving together the key findings of the Australian *Robodebt* case with UK authorities, this article

[78] [1990] 2 AC 605, HL.
[79] *Robinson v West Yorkshire Chief Constable* [2018] UKSC 4.
[80] See e.g., Panel of Eminent Persons, Review, 153-157; Aronson, "Government Liability," 80; Bell-James, "Public Authority Liability," 3.
[81] Cf in the related field of the government's negligence liability for environmental harms, *Minister for the Environment v Sharma* [2022] FCAFC 35.
[82] Fairgrieve, The Negligence Liability, Chapter 1.
[83] [1999] HCA 36 at [10].
[84] [2022] FCAFC 35.
[85] For example, various provisions under *Wrongs Act 1958* (Vic) will become relevant.

highlights the need for imposing a duty of care on authorities' adoption of algorithmic tools in welfare systems in both jurisdictions, particularly on the systems' design and subsequent operation.

Challenges to imposing a duty of care in such a novel context are inevitable. Yet, the common law has always evolved in response to new realities. This article has argued for a principled and adaptive approach – one that reexamines the foundations of common law precedent and embraces technological advancements to not only address these challenges but also transform them into opportunities. The task ahead is to refine these principles, ensuring that legal frameworks remain robust, just, and fit for the complexities of the modern age.

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