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ALGORITHMIC GOVERNANCE, FORESEEABILITY, AND INSTITUTIONAL RESPONSIBILITY: REASSERTING LAW'S CAPACITY TO GOVERN EMERGING TECHNOLOGIES

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Abstract

The growing use of algorithmic systems in government and in the public sector has led to widespread concern regarding the capacity of law to guarantee accountability and fairness. This paper challenges that assumption. It argues that the main challenge faced by algorithmic governance is not a conceptual failure on the part of law, but rather an institutional reluctance to apply established legal disciplines to decisions made through technologically mediated means.

Through both a doctrinal analysis and a socio-legal analysis, the paper shows that the core legal concepts of foreseeability, due diligence, and institutional responsibility remain capable of regulating algorithmic systems if they are applied with sufficient procedural rigor and institutional discipline.

The paper also reconceptualizes algorithmic regulation as a problem of allocating risks rather than a problem of technological exceptionalism. It demonstrates that uncertainty does not displace legal responsibility; instead, it increases the obligation of public and private institutions to anticipate foreseeable harms, document their decision-making processes, and maintain accountable structures. By shifting the analytical focus from technological opacity to institutional discipline, the paper provides a legally grounded framework for assessing the failures of algorithmic governance without abandoning existing legal doctrine or adopting technological exceptionalism.

Keywords: Algorithmic Governance; Law and Technology; Foreseeability; Institutional Responsibility; Risk Allocation; Socio-Legal Analysis

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SECTION I

Introduction:

Algorithms and artificial intelligence (AI) are rapidly incorporated into the regulation of markets and government services and are changing the way that legal authority is exercised in modern society. Increasingly, automated tools are influencing who receives what amount of welfare benefits and what violations of regulations are prosecuted. In these ways, algorithmic systems are making decisions that determine people's access to their legal rights and their social entitlements, thereby determining the opportunities available to individuals during their lifetimes. As a result, algorithmic governance has become a central area of research interest within the field of law and technology.[1]

Tort law and administrative decision-making both involve governing uncertain environments. In addition, there is a large body of contemporary literature that sees the rise of algorithms as a threat to law. Many writers argue that the traditional legal constructs of foreseeability, responsibility, fault, and fair procedure require humans to make decisions based upon rational thought. However, many AI systems rely on statistical methods for decision-making and may employ adaptive learning.[2] These methods often produce results that are opaque to the designers too.

As a result, many writers have argued that traditional legal doctrines are incapable of regulating AI decision-making and have called for special legal rules to be created to deal specifically with AI and other technologies. However, the ability of governments to govern uncertain environments has always been one of the primary characteristics of legal systems. While AI systems present new challenges for legal systems, they do not present new challenges to the legal system's ability to apply as well as enforce legal responsibility. Rather, AI systems challenge the extent to which the legal system takes seriously its responsibility to protect citizens from wrongdoing.[3]

This paper argues that the primary issue associated with AI is not technological novelty but rather institutional responsibility and the allocation of risks. All decisions relating to whether

[1] Karen Yeung, 'Algorithmic Regulation: A Critical Interrogation' (2018) 12(4) *Regulation & Governance* 505.
[2] Mireille Hildebrandt, Smart Technologies and the End(s) of Law (Edward Elgar 2015).
[3] Julia Black, 'Decentring Regulation: Understanding the Role of Regulation and Self-Regulation in a "Post-Regulatory" World' (2001) 54 *Current Legal Problems* 103.

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or when to use an AI system, how to configure an AI system, for what purpose to use an AI system, and what safety measures to include when using an AI system are institutional decisions made by officials acting under legally recognized forms of authority. Thus, despite the fact that decisions are technically mediated by an AI system, official institutions can still be held legally accountable for those decisions.

Furthermore, this paper shows that fundamental legal constructs (foreseeability, due care, proportionality, and institutional accountability) retain their normative strength when applied to AI systems, provided that institutional procedures are implemented with sufficient rigor and institutional responsibility and good governance practices are followed. The need to prevent harm does not provide an excuse for failing to take steps to avoid foreseeable harms; it increases the obligation to anticipate potential harms, to document decision-making processes, and to create mechanisms of accountability and review. By locating AI governance within a socio-legal framework, this paper diagnoses the failures of regulatory activity. In instances where AI systems cause harm by means of bias, exclusion, or incorrect decision-making, the causes of the harm are typically attributed to the technical complexities of AI. This paper argues that such attributions are insufficient.

Harm occurs not because AI exists, but because institutions choose to utilize AI systems without adequate protection, oversight, or legal scrutiny. Therefore, the source of the harm lies not in the technology itself, but in the institutional choices that are made regarding the utilization of that technology.[4]

Section I-A describes the methodology employed by this paper, the scope of the study, and the limitations of the study. Section II analyzes AI decision-making through a socio-legal lens and critiques claims that AI undermines law's regulatory capability. Section III develops the concept of institutional responsibility and presents AI as a problem of risk allocation. Finally, Section IV addresses the conclusions and the implications of this paper"s argument for law's ability to regulate emerging technologies.

SECTION I-A: Methodology, Scope, and Analytical Limits

This paper uses a combination of socio-legal methodology and a traditional legal methodology

[4] Deirdre K Mulligan and Kenneth A Bamberger, ‘Privacy on the Books and on the Ground’ (2015) 63 *Stanford Law Review* 247

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based on positive law. It applies this methodology using a comparative approach to assess how established legal principles relating to foreseeability, institutional responsibility, procedural fairness, and administrative accountability, which currently apply across public law, regulatory law, and general principles of legal liability, also apply when decisions are made using algorithms.

The socio-legal part of the methodology acknowledges that law operates through institutions, rather than abstractly. Legal norms become practically meaningful through administrative practices, organizational routines, and governance structures. This paper therefore does not regard algorithmic decision-making as an independent technical process but as an institutional process implemented in the context of legally established authorities. The focus of the study, therefore, is on states, public agencies, regulatory bodies, and corporate organizations that develop, authorize, contract for, and implement algorithms.

In order to maintain clarity regarding legal doctrine, this paper has chosen to limit the scope of the study to ensure that it remains doctrinally focused. First, the study does not include a technical or engineering evaluation of algorithms. References to technical aspects of algorithms are limited to those that are legally relevant. Second, this paper does not put forward alternative ethical frameworks for regulating algorithms as replacements for legal regulation. Third, the study has a preventive orientation. Rather than concentrating solely on ex post remedies, this paper emphasizes the importance of ex ante legal controls, risk assessments, and institutional guarantees. This orientation recognizes that many harmful effects of algorithms may be systematic and may be very difficult to remediate after they occur. The purpose of the study is to show that algorithmic regulation reveals institutional failures of responsibility and governance discipline, rather than failures of the law itself.

SECTION II: Algorithmic Decision-Making and the Myth of Legal Disruption

II.A. Algorithmic Governance as an Institutional Practice:

The technology behind automated decision-making is often framed today in terms of technology that functions on a self-sustaining basis with little to no human involvement. Automated systems are referred to as "black boxes" that suggest legal accountability ceases when technology mediates governance through code. However, this framing ignores the central socio-legal fact that algorithmic governance is not an autonomous process; it is an institutional practice. Every algorithm used in governance or regulation is developed using a multitude of

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institutionalized human and organizational processes, including decisions on system design, data collection, procurement, authorization, scope, threshold for intervention, oversight mechanisms, and appeals/reviews. Institutionalized decision makers also establish the acceptable error rates for algorithms and how to act upon their output.

Therefore, from a socio-legal perspective, the appropriate unit of analysis is the institution that provides the authorization for the algorithm's use, rather than the algorithm itself. In other words, algorithmic governance represents a shift in administration techniques, not a transfer of legal agency. The use of complex instruments, e.g., actuarial tools, statistical models, expert systems, etc., to mediate decision-making has been subject to legal regulations. Algorithmic systems simply increase the level of mediation of decision-making, but they have not changed the legal nature of that mediation.[5]

Understanding algorithmic governance as an institutionalized process is critical to undermining claims that the law has become technologically obsolete. Responsibility for the use of technically opaque systems does not derive from the lack of understanding of the system's operation per se; rather, it derives from the institutionalized decisions concerning the management, restriction, and justification of the opacity of those systems. If an institution utilizes systems whose operation it cannot completely explain, the legal inquiry is not whether responsibility disappears for the use of those systems; rather, the legal inquiry concerns whether sufficient safeguards were instituted to mitigate risks that could have reasonably been foreseen at the time the systems were utilized.[6]

II.B. Uncertainty, Risk, and Law's Historical Function:

A primary argument made against algorithmic governance by its opponents is that these systems undermine the law by allowing for an unacceptable amount of uncertainty in their decisions. Critics argue that the probabilistic nature of the decisions made by these systems, along with their ability to learn and adapt to new information, allows for too much uncertainty regarding what the outcome of a particular action will be and therefore prevents the legal standards of foreseeability, fault, or reasoned justification from being reliably met.

Critics of algorithmic governance base this claim on a misunderstanding of how the law has

[5] Yeung (n 1) 508.
[6] Yeung (n 1) 512–13.

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traditionally operated. Legal systems have historically operated under conditions of uncertainty and have consistently allowed for uncertainty without suspending legal liability. Instead, the law has developed doctrines of due care, reasonable anticipation, and precaution that address the issues raised by uncertainty in decision-making.[7]

Foreseeability is a legal standard that does not require that there be a precise prediction of what happened as a result of a decision, but rather, that a decision maker would reasonably anticipate that certain harms may occur. The level of harm anticipated can vary depending on the knowledge available to the decision-maker when the decision-maker acts. Foreseeability is designed to be a flexible standard and to accommodate complex situations by focusing the inquiry on the quality of the decision-making process rather than on the certainty of the outcome.

Therefore, algorithmic uncertainty presents no novel challenges to the law. What is novel about the situation created by algorithmic systems is the scale and extent of responsibility that decision-makers bear for their actions. In many cases, decision makers are located in multiple organizations (for example, the developers of the algorithms, the suppliers of the data used by the algorithms, the procurement officials who purchase the algorithms, and the administrative officials who implement the algorithms), and it appears as if the accountability for those decisions is dispersed among them. Rather than attempting to eliminate this complexity, the law should focus on ensuring that institutions do not use the complexity introduced by the large number of decision makers involved in creating and implementing algorithmic systems to avoid taking responsibility for their decisions.[8]

II.C. Foreseeability in Algorithmic Systems:

Algorithmic governance is an area where foreseeability is primarily evaluated on a system-wide basis. Instead of asking if there can be predictive certainty about what specific outputs from algorithms will be, we want to know if the overall risk profile of a given system would have been reasonably foreseeable when the system was first implemented and deployed.[9]

The issues of bias, exclusion, errors due to automation, opacity, and excessive reliance on past

[7] Julia Black (n 3).
[8] Yeung (n 1) 520-522.
[9] Frederik Zuiderveen Borgesius, 'Strengthening Legal Protection against Discrimination by Algorithms' (2020) 24 *International Journal of Human Rights* 1572.

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data are not speculative and are well-documented characteristics of many forms of algorithmic systems being used in government. Therefore, while those who operate such systems may acknowledge the limitations and foreseeable consequences of their use, they are still legally responsible for how they manage those known risks. Thus, legal liability does not depend on the occurrence of some sort of error but depends on how institutions choose to deal with the known risks they face.

By evaluating foreseeability based on how institutions have engaged in ex-ante risk assessments, documented the assumptions that underlie those assessments, and implemented controls (safeguards) proportional to the risk of harm associated with a system, we can avoid both the technologically deterministic view of foreseeability and the hindsight bias that would result from the evaluation of institutions based solely on post-hoc analysis of performance.[10] In other words, foreseeability is activated in the context of algorithmic governance, not eliminated. As such, the more opaque and uncertain a system is, the more robustly must the institutions operating that system demonstrate why the system should be allowed to operate as it is and what mechanisms are in place to limit the adverse impacts of that system.

II.D. The Limits of Technological Exceptionalism:

While there may be a justification for adapting existing laws as a result of changes in technology, it is neither necessary nor desirable to abandon existing legal principles altogether as a result of this type of technological innovation.

If we continue down the path of exceptionalism, we will undermine accountability through the relocation of the regulatory system (or at least the means of providing some level of accountability) away from the legal system to codes of ethical conduct, technical standards, Cary voluntary compliance programs, etc., all of which can augment legal regulation, but none of which can replace legally enforceable duties, responsibilities, and institutional accountability.

Absent legal accountability, algorithmic governance will get isolated from any type of meaningful review.[11]

[10] Cary Coglianese and David Lehr, 'Regulating by Robot' (2017) 105 *Georgetown Law Journal* 1147. Frederik
[11]Richard Binns, 'Fairness in Machine Learning: Lessons from Political Philosophy' (Proceedings of the 1st Conference on Fairness, Accountability and Transparency 2018) 149.

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This article takes a position of legal continuity. Algorithms do not make law obsolete; rather, they reinforce the importance of the law. Rather than creating new principles of regulation, the issue is whether institutions are applying the existing principle(s) of regulation consistently, transparently, and responsibly. By continuing to reject the notion of technological exceptionalism, the law maintains its authority to create a moral basis for regulating the rapid pace of technological development.[12]

SECTION III: Institutional Responsibility and the Allocation of Algorithmic Risk

III.A. From Individual Fault of Institutional Responsibility:

Legal frameworks have generally understood responsibility through actions of human actors exercising discretion within defined roles. But algorithmic systems distribute decision-making across designers, data curators, vendors, procurement bodies, administrative officials, and oversight authorities. This distribution has led some to suggest that responsibility becomes fragmented or watered down in algorithmic governance.

Law has long recognized other forms of responsibility that extend beyond individual fault. Administrative law, constitutional law, corporate liability, and regulatory regimes routinely assign responsibility to institutions rather than to individual actors. Algorithmic governance doesn't violate this logic—it increases the need for its proper application.[13]

Institutional responsibility refers to the obligation of legally constituted entities, states, public authorities, regulatory agencies, and corporations to ensure their decision-making processes are compliant with applicable legal norms. When algorithm-based systems are used, responsibility is not attached to the internal functioning of the system but to the decision by an institution to rely on the system, the conditions under which it is deployed, and the safeguards that accompany its use. So the legal inquiry will not be who caused the algorithm to err, but which institution authorized the risk, on what basis, and with what protections in place.[14]

[12] Hildebrandt (n 2)
[13]Jerry L Mashaw, 'Reasoned Administration: The European Union, the United States, and the Project of Democratic Governance' (2007) 76 George Washington Law Review 99.
[14] Omri Ben-Shahar and Ariel Porat, *Fault in American Contract Law* (CUP 2019) ch 2.

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III.B. Risk Allocation as a Socio-Legal Choice:

Risk in automated systems often is shifted from frontline decision makers to those impacted by the automated system, especially those affected by welfare determination systems (i.e., TANF, Medicaid), predictive policing systems, credit scoring systems, or regulatory sanctions systems.

This redistribution is not determined by technology. Rather, this redistribution is an institutional choice made by decision makers within institutions using automated systems. These normative choices include acceptable error rates, the degree of acceptable false positives, the degree of acceptable false negatives, the use of historical data, thresholds for intervention, and degrees of explainability.[15]

Each of these choices determines who will bear the consequences of uncertainty created by the automated system. When institutions prioritize efficiency, scalability, cost reduction, etc. over procedural safeguards, they are making an implicit choice that individuals will be the ones to bear the risk of errors caused by the automated system.

Thus, from a socio-legal perspective, the allocation of risk is a governance decision that has distributive consequences. Law exists to scrutinize and constrain these types of decisions. Therefore, treating algorithmic risk as a purely technical problem ignores the normative dimension of algorithmic risk. While improved code or better data can decrease some forms of risk, neither of these can replace legal justification based on principles of fairness, proportionality, and accountability.[16]

By viewing algorithmic governance through the lens of risk allocation, legal analysis shines a spotlight away from perceived machine autonomy and toward institutional choices that determine how uncertainty created by the automated system will be managed and on whom it will fall.

III.C. Documentation, Traceability, and Legal Accountability:

The ability of governmental bodies to provide rational explanations for their choices has always

[15] Julia Black, 'Decentring Regulation: Understanding the Role of Regulation and Self-Regulation in a "Post-Regulatory" World' (2001) 54 *Current Legal Problems* 103.
[16] Julia Black (n 3)

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been one of the defining characteristics of lawfully governed jurisdictions. However, the use of opaque (i.e., unintelligible) algorithmic systems challenges the ability of governmental bodies to meet this obligation; however, the inability of governmental bodies to meet this obligation does not eliminate the obligation, it intensifies it.

Institutions that choose to utilize opaque algorithmic systems are subject to a duty to create and maintain a record of decision traceability. Creating and maintaining such records will require the institution to document the intended application of the system; all identifiable risks that could reasonably have been foreseen when the system was deployed; the assumptions upon which the system operates; the limitations of the system's reliability; and the mechanisms that can be employed in order to review, correct, or override system-generated decisions. As stated above, documentation serves both preventative and accountability purposes.[17] Ex ante (before the fact), documentation encourages institutions to consider identifiable risks before they result in harm. Ex post (after the fact), documentation allows courts to assess whether the institution acted with due care in fulfilling their legal duties.

Therefore, the failure of institutions to document risk assessments or decision logic regarding an opaque algorithmic system should be considered a governance failure. Without documentation explaining how decisions generated by an opaque algorithmic system were authorized or constrained, claims that resulting harms were unforeseeable will likely lack credibility in a court of law. Therefore, documentation converts the previously abstract legal concept of foreseeability into an institutional practice.[18]

III.D. Algorithmic Systems and Procedural Fairness:

Procedural obligations related to institutional responsibility must likewise be met in relation to the application of algorithmic systems in public decision-making, which must meet foundational principles of fairness, reasonable decision-making, and access to a remedy. These foundational principles of fairness, reasonableness, and access to remedies are not diminished by the use of automated processes.

Institutions that make decisions based upon output from an algorithmic process must ensure

[17] Jerry L Mashaw, 'Reasoned Administration: The European Union, the United States, and the Project of Democratic Governance' (2007) 76 George Washington Law Review 99.
[18] Coglianese & Lehr (n 10)Jerry L.

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that the individual whose rights are influenced by the decision has the right to determine how the decision was made, to challenge the decision if it is incorrect or unfair, and to receive a fair hearing from a human decision-maker. This does not necessarily require complete technical transparency of the system used to produce the output or the disclosure of all aspects of the source code. Rather, what is required is enough information about the operation of the system to permit some level of legal scrutiny of the decision-making process and to permit the individual to mount a challenge to the decision, either before a court or through another form of dispute resolution.[19]

If institutions were able to avoid their procedural responsibilities simply by claiming that there was too much technical complexity involved, then government could be removed entirely from the purview of law and thus from the protections afforded by the rule of law. Therefore, institutional safeguards provide a critical means of anchoring decision-making using algorithms within the rule of law.[20]

III.E. Institutional Failure as the Core Regulatory Problem:

When harm results from an algorithmic system, public discussion often focuses on the technical failures of the system—e.g., bias in the data used to develop the model, error in the model itself, or technical malfunction of the system. While these can certainly be contributing factors to the harm resulting from the algorithmic system, they obscure the more fundamental issue of institutional failure.[21]

The harm is not caused by the existence of the algorithms themselves, but rather by the fact that institutions have deployed such systems without adequate safety nets, oversight bodies, or accountability structures. Regulatory failure in the use of algorithms is therefore properly understood as a failure of institutional responsibility, not a failure of technology.[22]

This understanding of regulatory failure in algorithmic governance changes the nature of the regulatory dialogue. The solution to problems arising from algorithms cannot be found in either abandoning technology or romanticizing innovation but rather in strengthening the

[19] Mashaw (n 13)
[20] ibid
[21] Mulligan & Bamberger (n 4)
[22] Jerry L Mashaw, Bureaucratic Justice: Managing Social Security Disability Claims (Yale University Press 1983).

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mechanisms of institutional governance. In so doing, law will continue to have the capacity to regulate new technologies without reverting to technological exceptionalism or regulatory abdication. By returning responsibility for the regulation of technology to institutions, law can function as it always has: as a mechanism of social ordering that regulates relationships between people, organizations, and governments.[23]

SECTION IV: Preventive Governance and Ex Ante Legal Control

IV.A. From Reactive Accountability to Preventive Regulation:

Historically, legal systems have employed a reactive approach toward the occurrence of harm. Rights violations are first addressed through the courts; the imposition of sanctions follows the breach of regulations; and compensation for injuries occurs subsequent to the event causing them.

Algorithmic decision-making is typically carried out on an enormous scale and can affect a considerable number of individuals at the same time. An error is almost never simply a one-time mistake; it is usually a systemic problem that exists within the processes of the organization utilizing the algorithms. In such cases, ex post facto remedies (individual appeals, judicial review, etc., as well as compensation) are generally unable to prevent the repetition of similar errors or the infliction of harm upon multiple people. As soon as the algorithmic system is incorporated into routine administrative practice, its effects can become normalized before any meaningful legal scrutiny takes place.[24]

Preventive governance addresses this shortcoming by changing the locus of legal responsibility from a point downstream, where institutions respond to the need to remedy harms resulting from algorithmic systems, to a point upstream, where institutions make decisions about how to design, procure, and implement such systems. The key principle here is legal responsibility should exist prior to any harm occurring, at a point in time when institutions have the maximum amount of control over the potential risks associated with technology.

In terms of the type of regulatory mechanism that would be required to achieve the goals of preventive governance, there is no new regulatory burden being introduced. Rather, a

[23] Carol Harlow and Richard Rawlings, Law and Administration (4th edn, Cambridge University Press 2021) 45–48.
[24] Coglianese & Lehr (n 10)

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preventive approach to regulation would involve the application of existing principles of administrative legality, proportionality, and reason-giving in a technologically mediated context, and as such represents a renewal of a discipline that has long existed in areas such as public health governance, environmental protection, and consumer safety.

Therefore, a preventive approach to the use of the legal system to regulate the impact of algorithmic systems is not a matter of policy choice but a logical and structurally inevitable outcome of the principles of administrative legality and accountability that underlie the operation of all institutions.[25]

IV.B. Ex Ante Assessment as a Legal Obligation:

To practice preventive governance, government agencies must perform an ex ante legal review before using algorithms for administrative decision-making. The legal review is not a mere technical evaluation of the functioning of an algorithmic system nor simply a compliance review to ensure that all necessary laws have been followed. Rather, the legal review is a legal determination of whether the use of the system is consistent with both the letter and spirit of constitutional law and statute and with the principles of administrative due process. A comprehensive ex ante legal review of the intended use of an algorithmic system includes a number of elements. These include an analysis of the decision-making context, an evaluation of the potential harm that may arise from the output, a determination of the level of human supervision needed over the output of the system, and an assessment of the relative costs/benefits of the use of the system. Importantly, while an ex ante legal review can provide information about likely outcomes, it does not require complete certainty regarding those outcomes. In general, the law does not expect an agency to forecast each possible outcome associated with the operation of a particular program or system but rather to act reasonably based upon the reasonable expectations of the consequences of its actions.[26]

In cases where there are substantial uncertainties, the legal response is not necessarily a reduction of liability but rather increased scrutiny and caution by the agency. Agencies that are using algorithmic systems in critical areas such as welfare administration, policing, and/or regulatory enforcement, however, cannot avoid accountability through post-hoc justifications for harm caused by their decisions. As such, agencies that do not conduct thorough ex ante

[25] Mark Elliott, 'The Constitutional Foundations of Judicial Review' (2016) 65 *Cambridge Law Journal* 101.
[26] Elizabeth Fisher, *Risk Regulation and Administrative Constitutionalism* (Hart 2007).

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reviews of the planned deployment of algorithmic systems should be held accountable for failures in governance, rather than for failures of technology.[27]

IV.C. Proportionality and Context- Sensitive Safeguards:

Proportionality is a fundamental aspect of administrative law; it refers to the suitability of the measure used to achieve the objective (suitability), whether there were alternative measures that could have been taken (necessity), and whether the burden imposed by the measure was reasonable relative to the interest being protected (balancing).

The proportionality principle has long served as an organizing principle for legal control in areas of high complexity, uncertainty, and conflicting public interests.

Proportionality can provide a conceptual basis for calibrating legal controls against the rights impacts of automated decision-making systems (algorithmic governance). Different automated decision-making systems pose different legal risks. For example, those utilizing automated decision-making systems for internal administrative purposes will present very different legal issues compared to those that determine welfare entitlements, trigger law enforcement actions, impose regulatory sanctions, etc.[28] Accordingly, proportionality demands that legal review and procedural protections escalate as the potential harm to individuals' rights escalates.

Therefore, automated decision-making systems that pose significant risks to individuals' rights require greater protection, including adequate human oversight, documented justification for relying on automatic decisions, and accessible processes for challenging automated decisions, than lower-risk automated decision-making systems, subject to transparency about the operation of the system and its ability to be reviewed under the law.

Proportionality avoids regulatory abandonment and overly burdensome regulation of automated decision-making systems. In addition, proportionality establishes a conceptual base for applying traditional administrative law principles to preventatively govern automated decision-making systems as opposed to treating them as technologically exceptional.[29]

[27] Julia Black (n 3) Elizabeth
[28] Craig, P. (2018). *UK, EU, and global administrative law: Foundations and challenges*. Cambridge: Cambridge University Press.
[29] Mashaw (n 22).

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IV.D. Preventive Governance and Democratic Accountability:

Preventive governance has an additional constitutional function as well as protecting democratic accountability when technology acts as a mediator for public power.[30] The ex ante requirements of providing documentation and reviewability of decisions made about individual rights ensure that these decisions are traceable back to specific institutions instead of being hidden behind the technical nature of algorithms. This is why preventive governance not only reduces harm but also preserves the rule of law, as public authority must be acted on in a rational, contestable, and accountable manner.[31]

CONCLUSION:

The argument in this article is that the regulatory difficulties presented by "algorithmic governance" are not caused by a conceptual weakness of law but by an institutional inability to apply existing legal disciplines to decisions made through technological mediation. Law, as it has been historically practiced, operates in all environments of uncertainty, risk, and informational asymmetry. By viewing "algorithmic governance" as an issue of institutional responsibility and risk distribution, the paper demonstrates that the existing legal principles of foreseeability, due diligence, proportionality, and procedural fairness continue to have normative value. Algorithmic systems do not remove institutional responsibilities; they merely relocate them among institutional structures that are responsible for designing, authorizing, and relying upon automatic decision-making technologies. Therefore, institutional responsibility continues to be based upon institutional choices rather than technological determinism.

The paper also shows that uncertainty does not reduce legal obligations; rather, as the complexity and obscurity of algorithmic systems increase, so too does the obligation of institutions to assess prior to the use of these systems, to document known risks, and to develop proportional safety measures. Preventive governance is no longer viewed as a discretionary option but as a structural necessity in order to provide accountability to systems operating on a large-scale basis.

In many of these contexts, "algorithmic governance" is introduced into public administration before legal protections can be developed. As a result, there is a tendency to view technology

[30] Nikolas Rose and Peter Miller, 'Political Power beyond the State' (1992) 43 *British Journal of Sociology* 173.
[31] Anne Peters, 'Global Administrative Law and the Legitimacy of International Organizations' (2016) 14 *International Journal of Constitutional Law* 31.

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as neutral, inevitable, and self-justifying. However, law's purpose is not to impede the development of new technologies but to require that technological innovation occur within a context of responsibility, accountability, and scrutiny.

Therefore, the continued relevance of law in the era of "algorithms" is not dependent upon law's ability to understand complex technology, but upon law's ability to maintain institutional responsibility and governance discipline and the willingness of public authorities, regulatory bodies, and private actors to take responsibility for the risks created by the authorization of these systems and to govern uncertainty, rather than merely to displace it. It is institutional structures that govern society, and where institutional structures are held accountable, then law continues to be authoritative. Thus, the difficulty of "algorithmic governance" is not whether law can govern technology, but whether institutional structures remain willing to be governed by law.

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