



ARTIFICIAL INTELLIGENCE AND ADMINISTRATIVE DECISIONS: RETHINKING THE GENERAL THEORY OF ADMINISTRATIVE ACTS IN THE AGE OF ALGORITHMS

D^r. FEROUANI Amal Linda

National Higher School of Management,
Algeria

ferouaniamallinda@gmail.com

Laboratory of managerial innovation,
governance and entrepreneurship (LIMGE)

D^r. BENTIFOUR Abdelbasset*

Abu Bakr Belkaid university, Tlemcen
Algeria

Abdelbasset.bentifour@univ-tlemcen.dz

Maritime law and Transport laboratory

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Abstract:

This paper explores the legal implications of integrating artificial intelligence (AI) into administrative decision-making. As public authorities increasingly rely on AI systems, traditional administrative law—rooted in human discretion—faces conceptual and practical challenges. The study analyzes how AI interacts with the legal elements of administrative acts, including competence, cause, and purpose. It also examines issues of transparency, legality, and accountability, particularly in cases of algorithmic error. Through a comparative and analytical approach, the paper argues for doctrinal reform to accommodate AI within administrative law.

Keywords: Artificial Intelligence, Administrative Law, Automated Decision-Making, Algorithmic Transparency, Administrative Responsibility.

Introduction:

In the era of digital transformation, artificial intelligence (AI) has become a central tool in the modernization of public administration. Governments around the world are increasingly deploying AI technologies to enhance the efficiency, objectivity, and speed of administrative decision-making. From managing immigration systems to assessing welfare eligibility and optimizing tax administration, AI tools are reshaping the

* BENTIFOUR Abdelbasset & FEROUANI Amal Linda

relationship between citizens and the state (Barocas & Selbst, A. D., 2016, pp. 104(3), 671–732) (Burrell, 2016, pp. 3(1), 1–12). These systems promise not only operational gains but also a radical rethinking of how administrative bodies interact with data, interpret rules, and serve the public (Cane & McDonald, L, 2008).

However, the integration of AI into public governance has not occurred without concern. As early as the 2000s, scholars such as Frank Pasquale and Daniel Solove raised critical questions about the implications of automated governance for privacy, accountability, and transparency (Citron, 2007, pp. 1249–1313) (Coglianese & Lehr, D., 2017, pp. 1147–1223). More recent debates have highlighted the risks of bias embedded in algorithmic processes (Craig, 2016), the erosion of due process guarantees (Eubanks, 2018), and the potential for a "black box" effect in which administrative reasoning becomes increasingly inaccessible to those affected by it (Engstrom, D. F, 2020, pp. 20–47). These developments have brought to the fore a set of urgent legal and ethical questions: What happens to foundational principles of administrative law when decisions are no longer—or not entirely—made by human beings? How do we trace responsibility in a system characterized by distributed agency between humans and machines (Hildebrandt, 2015)?

The incorporation of AI into administrative decision-making presents a set of complex legal challenges. Classical administrative law is built upon foundational assumptions: that decisions are taken by human agents; that these agents exercise judgment and discretion; and that their actions are subject to legal scrutiny and judicial review (Molnar & Gill, L., 2018). These assumptions are being fundamentally questioned in the face of machine-generated or machine-assisted decisions, which are often opaque, data-driven, and devoid of traditional human reasoning (Digital Government Review of Sweden: Towards a Data-Driven Public Sector, 2019) The delegation of decisional authority to algorithms complicates traditional legal categories



such as discretion, motivation, and fault, raising doubts about whether existing normative frameworks remain adequate in this new governance landscape (Pasquale, 2015, p. 115).

As governments deepen their reliance on algorithmic systems, flawed or unaccountable AI decisions risk entrenching systemic biases, diminishing individual rights, and weakening public trust in administrative institutions (Rancherías, 2020, pp. 213–234)

This research aims to interrogate the extent to which the general theory of administrative acts remains viable when decisions are increasingly made by or with the assistance of AI. The central problem can be formulated as follows: Can AI systems be incorporated into existing legal frameworks governing administrative decisions without undermining core principles such as legality, transparency, and accountability? Or does this technological shift necessitate a fundamental reconfiguration of those frameworks to accommodate new types of agencies, risk, and legal subjectivity?

The study proceeds from two hypotheses: First, that AI systems, like human officials, can produce legally flawed administrative decisions, including acts that exceed jurisdiction, misapply discretion, or fail to achieve a legitimate public purpose (Sartor, 2020, pp. 511–531). Second, that existing legal categories—particularly the distinction between personal and service-related faults—are insufficient to address the unique accountability dilemmas raised by AI-generated errors (Schuppert, 2011). In other words, while the effects of unlawful decisions persist, the attribution of responsibility becomes increasingly complex when systems operate autonomously or semi-autonomously (Solove, 2001, pp. 1393–1462).

Using an analytical and comparative methodology, this paper draws on legal doctrine, case studies, and examples from countries such as Canada, the United States, and members of the European Union (Wachter, Mittelstadt, B., & Floridi, L, 2017, pp. 843–857). It relies on interdisciplinary sources from administrative law, legal theory, and technology studies to assess

the extent to which AI systems conform to or disrupt traditional legal standards (Yeung, 2018, pp. 505–523) (Zuboff, 2019) By situating the discussion within both domestic and transnational regulatory contexts, this research aims to offer a nuanced understanding of how legal systems can adapt—both conceptually and institutionally—to the challenges posed by AI-driven public administration.

Section I: Conceptual and Theoretical Framework

In the context of administrative law, integrating Artificial Intelligence (AI) into decision-making processes requires a robust understanding of both the technological underpinnings and the legal principles at stake. As governments increasingly deploy AI in various sectors, from immigration control to social welfare, the need arises to critically analyze how this shift reconfigures classical administrative norms. This section lays the groundwork for such an inquiry by first unpacking the technological aspects of AI and then examining how its integration disrupts foundational elements of administrative legality.

A) Understanding Artificial Intelligence

(AI) refers to the capacity of machines to perform tasks traditionally requiring human intelligence, such as learning, reasoning, and decision-making (Russell & Peter Norvig, 2021, pp. 1–30). In public administration, AI technologies are increasingly used to automate bureaucratic tasks, improve service delivery, and streamline decision-making processes.

AI systems in administrative settings generally fall into three categories: • Expert systems, which use pre-programmed rules to simulate expert human decision-making; • Machine learning (ML) models, which detect statistical patterns and adapt over time through exposure to large datasets; • Neural networks, including deep learning frameworks capable of complex classifications and predictive analytics (Goodfellow, Yoshua Bengio, & Aaron Courville, 2016, p. 12) (Završnik, 2020, p. 561).



Public administrations have deployed these tools for tasks such as automated document verification, eligibility assessments for welfare programs, risk profiling in policing, and fraud detection in tax and immigration systems (OECD, 2019, pp. 18-33). These systems offer benefits such as increased consistency, faster processing, and reduced costs (Wirtz, Jan C Weyerer, & Christopher W Geyer, 2019, pp. 900-902).

However, the legal and ethical risks are significant. One major issue is the so-called "black box" problem, where the decision-making processes of complex AI systems (particularly deep learning models) are opaque even to their developers (Burrell J. , 2016, pp. 1-3). As Frank Pasquale argues, this lack of transparency undermines the ability to contest decisions and threatens procedural justice (Pasquale F. , 2015, pp. 1-22).

Another central concern is algorithmic bias. Because ML systems are trained on historical data, they can reproduce and reinforce systemic inequalities (Barocas, Moritz Hardt, & Arvind Narayanan, 2023). A well-known example is the COMPAS tool used in the US criminal justice system, which inaccurately classified Black defendants as higher risk than white defendants with similar histories (others, 2016).

In response, legal scholars have argued for new frameworks of accountability that reflect the distributed agency inherent in AI-driven systems (Hildebrandt M. , 2015, pp. 35–47). Legal responsibility, they argue, must be reconceptualized to address the normative role played by algorithms, data, and code within administrative processes.

B) Administrative Decision-Making and Legal Theories

To understand how artificial intelligence reconfigures administrative law, it is essential first to revisit the foundational legal theories that structure administrative decision-making. Classical doctrine provides a well-established framework for evaluating the validity, form, and effects of administrative acts. These traditional principles serve as a benchmark against which the legal disruptions introduced by AI can be measured. The

following subsection outlines the classical theory of administrative acts and sets the stage for analyzing its resilience - and limitations -in the face of technological transformation.

The Classical Theory of Administrative Acts Traditional administrative law is anchored in the theory of administrative acts, which refers to unilateral legal acts by public authorities that produce legal effects (Burrell J, How the machine ‘thinks’: Understanding opacity in machine learning algorithms, 2016, pp. 1–12). These acts are governed by strict procedural and substantive rules to ensure legality, transparency, and accountability.

The theory rests on several pillars:

- **The act must emanate from a competent authority:** his principle ensures that only bodies or individuals legally empowered by statute or regulation can produce decisions that bind third parties. Competence, in this context, is not merely procedural but a substantive condition for the validity of an administrative act. Delegation of power, ultra vires actions, or decisions taken by unauthorized entities are considered null or voidable. In an era where AI systems increasingly participate in administrative decision-making, questions arise regarding whether competence can be delegated to, or shared with, non-human agents. For instance, when an AI system generates visa refusals or calculates social security benefits, is the legal competence retained by the supervising human authority, or is it impermissibly delegated to a system that cannot assume legal responsibility?

- **It must be issued according to proper form and procedure:** Formality in administrative acts is not a matter of bureaucratic excess but a legal safeguard that promotes transparency, traceability, and the protection of individual rights. A properly issued decision typically includes written documentation, clear reasoning, and appropriate notification to the concerned party. Procedural safeguards such as the right to be heard, the right to access relevant information, and the



opportunity to appeal are critical components of the formality requirement. The automation of these processes by AI may reduce the visibility of these procedural steps. For example, algorithmic decisions may be generated without clear reasoning or explanation, undermining the formal requirements necessary for ensuring the act's legality and contestability.

- **It must respect legal norms and be subject to judicial review:** Every administrative act must comply with the overarching legal framework, including constitutional principles, statutory mandates, and international obligations. Moreover, the decision must remain accessible to judicial scrutiny. Judicial review is not only a means of correcting administrative errors but also a democratic tool to ensure that power is exercised within the bounds of the law. The integration of AI into decision-making complicates this pillar, especially when the rationale behind a decision is obscured by opaque algorithms or when the logic employed is inaccessible to judges and litigants alike. Ensuring the continued effectiveness of judicial review in such contexts requires new standards of transparency, explainability, and algorithmic accountability (Coglianese & Lehr, D, 2017, pp. 1147–1223).

This classical model presumes a human decision-maker who exercises discretion, interprets facts, and provides reasons. However, when AI systems generate or recommend administrative decisions, these assumptions are challenged. The absence of human intention and reasoning disrupts the attribution of legal will, which is central to the concept of an administrative act (Gonzalez, 2020, pp. 453–472)

Algorithmic Decision-Making and Its Legal Implications
Algorithmic decision-making refers to the process where decisions are made or significantly shaped by automated systems based on coded instructions and statistical models (Spain, 2018). Unlike traditional administrative decisions, these processes may lack transparency and individualized justification.

This raises a critical legal question: can decisions generated by AI qualify as administrative acts under public law? Scholars argue that a reconceptualization is necessary. Some propose that algorithmically generated outcomes be considered “automated administrative measures” subject to distinct standards of legality and review (state, 2020).

The German Federal Administrative Court, for example, has addressed the use of algorithmic tools in administrative contexts, affirming that such tools must be used within a framework that guarantees human oversight and the right to explanation (Schwartz, 2014, pp. 201–209).

Discretion, Automation, and Delegation A key concern is whether AI deployment constitutes an unlawful delegation of discretionary power. In many legal systems, discretion is a core aspect of administrative authority and cannot be delegated to non-human actors (Commission, 2022, p. 496). Automation risks hard-transparency coding decisions in a manner that bypasses case-specific evaluation and reduces the space for proportionality and fairness.

In response, courts and scholars advocate for a “human-in-the-loop” model, where final decisions remain under human control, ensuring that discretion is lawfully exercised and rights are protected (Binns, 2020). This approach supports the idea of AI as a decision-support tool rather than a substitute for legal judgment.

Due Process and Procedural Safeguards Administrative law is deeply tied to procedural fairness, including the right to be heard, access to reasons, and effective remedies. These safeguards are difficult to apply to opaque AI systems (Leenes, 2020, pp. 147–152)

The right to explanation, increasingly recognized in EU law, is a pivotal safeguard. Article 22 of the General Data Protection Regulation (GDPR) provides individuals with the right not to be subject to a decision based solely on automated processing



(JUDICIARY, 2019, p. 2057). However, its application to administrative decisions remains contested.

Courts in France and the Netherlands have emphasized the necessity of meaningful human intervention in automated decisions to ensure that affected individuals can understand, challenge, and obtain redress (Pasquale F. , 2015).

Toward a New Legal Framework Given these challenges, legal systems must adapt. Some scholars call for a shift from an “act-based” to a “process-based” understanding of legality in the AI era (Thompson & El-Khatib, H, 2021, pp. 712–745). This would involve evaluating the fairness, transparency, and accountability of the algorithmic process as a whole, rather than focusing solely on the final output.

Others advocate for hybrid models that integrate traditional administrative principles with new regulatory tools such as algorithmic impact assessments, audit trails, and ethics-by-design requirements (Commission, Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence (AI Act), 2021).

Ultimately, the legitimacy of AI in public administration depends on its alignment with constitutional and administrative values. The law must evolve to ensure that automation enhances, rather than undermines, democratic governance and the rule of law.

Section II: Legal Consequences of AI-Based Decisions

Before delving into the specific legal challenges posed by autonomous systems in administrative contexts, it is essential to first explore the broader implications of AI-based decisions on governance, accountability, and fundamental rights.

A) AI Autonomy and Administrative Legality

AI systems, particularly those driven by machine learning and neural networks, are designed to function with varying degrees of autonomy—adapting over time through iterative learning from massive datasets. This capacity for independent refinement introduces a complex legal dilemma: while such autonomy may

improve administrative efficiency, it simultaneously generates a tension with core principles of administrative legality and procedural justice. These principles demand that administrative decisions be lawful, rational, and amenable to legal scrutiny.

The principle of legality mandates that every administrative act must derive its authority from an established legal basis and be aimed at achieving a public interest objective. However, when AI-generated decisions are involved, it often becomes opaque whether statutory mandates are followed. The inner workings of many AI systems, particularly black-box models like deep learning, resist human interpretation, rendering it difficult to assess whether a decision aligns with the legal framework governing administrative discretion (Coglianese, Cary, & David Lehr, 2019, pp. 1–36). The lack of explainability complicates judicial review, leaving courts and oversight bodies at a loss when trying to evaluate such outputs. As Coglianese and Lehr argue, without meaningful transparency, algorithmic governance risks eroding one of the most fundamental principles of administrative law: the duty to provide reasons.

Moreover, this opacity severely compromises procedural fairness, a vital component of administrative legality. Procedural fairness ensures that individuals affected by a decision are given notice, an opportunity to be heard, and an explanation for the outcome. AI systems, especially those deployed in high-stakes areas such as welfare eligibility, migration control, and taxation, frequently fail to accommodate the nuances of individual cases. This mechanization of decision-making—however efficient—undermines the ability to treat like cases alike while accounting for exceptional circumstances. As Gonzalez notes, the automation of decisions eliminates human discretion and may impose disproportionate harm, particularly on vulnerable or marginalized groups (Gonzalez F. M., 2020, pp. 597–643)

The European Court of Human Rights has echoed this concern in decisions like *López Ribalda v. Spain*, where the Court emphasized the need for transparency in surveillance-based



employer decisions—suggesting that similar principles apply when opaque algorithms are used by state authorities (Rights, 17 October 2019). Meanwhile, the French Conseil d'état has ruled that even decisions based on automated systems must remain intelligible to those affected, reaffirming that AI does not displace the obligation of administrative reason-giving ((France), Judgment of 27 February 2020). The CJEU in the *Y.S. and M.* case similarly stressed that individuals should have access to the logic underlying automated decision-making.

These developments collectively highlight a growing consensus: the use of AI in administration must not erode the legal standards that have historically ensured fairness, accountability, and public trust.

B) Liability and Responsibility

One of the thorniest legal questions in the era of algorithmic governance is that of accountability. When AI systems generate flawed or unlawful decisions, determining who is legally responsible is rarely straightforward. Traditional administrative law distinguishes between personal fault—linked to an individual decision-maker—and service fault, where the administrative apparatus is collectively responsible for institutional failures (Commission, Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence (AI Act), 2021).

However, AI introduces a diffused model of agency, in which decisions emerge from interactions between software developers, public officials, data architects, and algorithms. This distribution of responsibility complicates the attribution of liability and demands a rethinking of existing doctrines. Three broad frameworks have emerged:

Developer Liability: When the error stems from design flaws in the algorithm—such as biased training data or faulty logic—the creators of the AI system may bear responsibility. In the EU, this aligns with product liability regimes and the upcoming AI Liability Directive, which places explicit obligations on developers to ensure safety and transparency (Commission,

Proposal for a Directive on adapting non-contractual civil liability rules to artificial intelligence, 2022).

Institutional Liability: Public administrations remain legally accountable when they adopt AI tools as part of their official procedures. Even if the decision is generated by a machine, the final responsibility lies with the authority that sanctioned the process. Courts in France and Germany have started to articulate this principle in cases involving social benefits and tax assessments (CNIL, 27 November 2020).

Shared Responsibility: Increasingly, courts and scholars propose a hybrid model in which liability is apportioned among developers, users, and institutions, depending on where the fault lies—whether in the dataset, the algorithm’s design, or the implementation phase (Commission, Ethics Guidelines for Trustworthy AI, 2019).

This tripartite structure reflects the complexity of modern administrative ecosystems. In the UK, the *Liberty v. Secretary of State for the Home Department* decision signaled the judiciary’s openness to scrutinize the role of AI tools in infringing on civil liberties, particularly when human oversight is minimal (Justice, 2019). Similarly, U.S. courts—while more conservative in their approach—have acknowledged that algorithmic systems must be subject to due process constraints, especially in decisions with punitive or exclusionary consequences (Wisconsin, 2016).

As Thompson and El-Khatib point out, the heart of the matter is not merely about assigning blame, but about preserving legitimacy in public administration. Democratic governance demands that state actions be subject to justification, oversight, and redress—values that AI, if unchecked, can easily circumvent (Thompson, Jeremy, & Rania El-Khatib, 2021, pp. 478–502). The European Commission’s 2021 Proposal for an Artificial Intelligence Act directly addresses this issue by emphasizing the importance of auditability, traceability, and human-in-the-loop mechanisms as essential safeguards for lawful algorithmic decision-making (Thompson & El-Khatib, H, 2021).



Conclusion:

The integration of artificial intelligence into administrative decision-making represents a profound shift in how public authority is exercised. While AI offers the promise of improved efficiency and consistency, it also threatens to undermine the foundational principles of administrative law. As this paper has demonstrated, AI challenges the legal validity, transparency, and accountability of administrative decisions.

The interaction between AI and the legal elements of administrative acts reveals structural tensions: the delegation of competence to non-human actors; the opacity of algorithmic reasoning; the potential distortion of public purpose; and the ambiguity surrounding legal fault.

To preserve legal certainty and public trust, administrative law must evolve. The following reforms are recommended:

- Codify standards for transparency, explainability, and auditability in AI decision systems;
- Establish accountability frameworks that allocate responsibility among developers, administrators, and institutions;
- Integrate procedural safeguards, including the right to explanation, the right to appeal, and access to human review;
- Promote interdisciplinary dialogue between legal experts, technologists, and policymakers.

Future research should explore how principles of democratic legitimacy, human rights, and constitutional values can be preserved in automated administrative governance. Only through a proactive and principled approach can legal systems ensure that AI serves the public good without compromising the rule of law.

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