

# On the Concept of the Algorithmic Administrative Act<sup>1</sup>

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## Abstract:

The increasing reliance of public administrations on algorithmic tools for decision-making calls for a new legal category: the algorithmic administrative act. This article argues that existing terminology—‘electronic,’ ‘digital,’ and ‘automated’—fails to capture the legal specificity of algorithmic intervention in administrative adjudication, especially in France. After establishing the case for the term ‘algorithmic administrative act,’ the article proposes a working definition: a legal decision, whether individual or regulatory, unilaterally adopted under the exercise of public authority to yield external legal effects, substantively influenced by an algorithm. This definition is built around three groups of attributes—objective, subjective, and procedural—and situates the concept within the classical theory of administrative acts, while identifying the distinct legal challenges that algorithmization poses for legality, transparency, and accountability.

## Keywords:

Administrative act, Administrative law, Automated decision-making, Algorithm

The use of digital tools by public administration, especially those involving AI, is no longer the exclusive preserve of science fiction or isolated political experiments, as was briefly the case in Chile in the 1970s.<sup>2</sup> The reliance of public authorities on algorithmic

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1 This article draws on the author’s doctoral thesis: Stepanov, A., *L’acte administratif algorithmique*, pref. Cossalter, P., 2026, Mare & Martin, 718 p.

2 What is meant here is the famous Project Cybersyn, intended for implementation under Salvador Allende’s government and inspired by recent progress in cybernetics. Partly realised, it was abandoned in 1973 after the Chilean coup. See Medina, E., *Cybernetic Revolutionaries: Technology and Politics in Allende’s Chile*, 2011, MIT Press.

support has since become a structural feature of contemporary governance, documented across a wide range of jurisdictions and administrative functions.<sup>3</sup>

What distinguishes the current wave of algorithmization from earlier phases of administrative digitalization is not the substitution of paper-based formalities by electronic equivalents—such as e-signing, digital platforms, and dematerialized procedures—but rather as an integral component of the decision-making process itself. but the integration of algorithms into the decision-making process itself. Programs no longer merely transmit or store decisions: they now directly influence, and in some cases determine, their outcome. In principle, every step of the administrative decision-making process may be subjected to algorithmic treatment, raising the prospect of full automation. Algorithms thereby touch the very core of the administrative act, including its legal structure.

This development poses a fundamental challenge to French administrative law. The theory of the *acte administratif*, consolidated over two centuries of doctrine and case law and constituting one of the most elaborate constructions of French public law, was built around the figure of the human decision-maker exercising unilateral public authority. Algorithmization disrupts this figure at every level: it displaces the locus of will, obscures competence, transforms the relationship between norm and fact, and raises new questions about legality, transparency, and accountability. The impact is already perceptible: a new form of administrative act is emerging—the algorithmic administrative act—and administrative law must now provide the conceptual tools to identify, regulate, and challenge it.

The present article undertakes this task within the framework of French administrative law, drawing on comparative insights where relevant. It is not a speculative construct but an attempt to adapt a classical legal theory to newly adopted techniques of administrative decision-making—and to identify some of those techniques as raising distinct legal problems from the outset. The analysis proceeds in two stages. The first establishes the terminological case for the expression ‘algorithmic administrative act’ over competing formulations. The second proposes a working definition of the concept, structured around three groups of attributes: objective, subjective, and procedural.

## I. Algorithmic Administrative Act: a Wording Challenge

Considering the legal significance of the phenomenon it seeks to define, the terminology used for the utilization of algorithms in administrative decision-making must be as precise and clear as the context allows. In this case, each word carries weight and meaning, which calls for an examination of the reasons behind these choices: why ‘algorithmic’? Why ‘administrative’? Why an ‘act’? The first question warrants the most comprehensive answer; hence it would be prudent to address it after exploring the others.

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<sup>3</sup> AlgorithmWatch, *Automating Society: Taking Stock of Automated Decision-Making in the EU*, 2019, 1st edn. Available at: [www.algorithmwatch.org/automating-society](http://www.algorithmwatch.org/automating-society); AlgorithmWatch, *Automating Society Report 2020*. Available at: <https://automatingsociety.algorithmwatch.org>; World Bank, *ID4D Practitioner’s Guide*, Version 1.0, 2019; Centre d’excellence ESEC, *Recueil de bonnes pratiques pour relier les systèmes ESEC et les systèmes de gestion de l’identité*, Centre de recherches pour le développement international, 2019.

## 1. *Why administrative?*

The word ‘administrative’ refers to the realm of French administrative law, examining the adjudicational activities of executive bodies—both inherently administrative endeavors. However, this term offers an opportunity to delve into the significance of the subject matter, where two key points emerge.

On the one hand, the digital transformation of the administration underscores its dominant position in its interactions with citizens and organizations. Administrative action relies on its binding nature: effective public management requires enforcement mechanisms. While French law encompasses administrative contracts within the category of administrative acts, the focus of this paper shall of unilateral nature, which seems to better encapsulate the singular nature of administrative law. In such cases, outcomes are contingent solely upon the decision of one party but binding upon another. Moreover, the decision-making party typically possesses greater resources and information, leaving the other party with little recourse but to accept its decisions. This emphasizes the importance of transparency and citizen control over state actions, crucial elements of ‘good administration.’<sup>4</sup>

Algorithmic implementation significantly impacts this dynamic. Like any tool, algorithms can be used for good, bad, or evil purposes. As administrations transition to digital realms, they face critical choices regarding algorithmic utilization and the regulation of such practices. Hence, it is assumed<sup>5</sup> that the European approach offers a democratic alternative to American ‘solutionism’ which reduces individuals to mere problems to be solved,<sup>6</sup> as well as to reject Chinese digital dictatorship, known for its dystopian surveillance and social credit systems.<sup>7</sup>

On the other hand, the digital landscape exposes Leviathan’s feet of clay: traditional public services now contend with private actors, challenging national sovereignty. For instance, Big Tech companies offer digital identity services through account creation, encroaching upon functions traditionally under state purview, such as ID issuance. Some governments, including the French one, consider this a call to establish national digital ID systems, safeguarding citizen data more effectively than private entities.<sup>8</sup>

Furthermore, for the first time in history, states can now be observed competing not only with private actors but also with each other in service provision. Estonia, a frontrunner in e-government rankings,<sup>9</sup> introduced e-residency eight years ago, which allows access to Estonian e-services (but also to pay taxes there) to anyone all over the world and

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4 On the concept of ‘bonne administration’ in French administrative law: Bunavot, M.-C., “La bonne administration : consolidation d’un droit sous influence européenne”, *Revue française de droit administratif*, 2010, p. 395.

5 Babinet, G., *Refondre les politiques publiques avec le numérique : Administration territoriale, État, citoyens*, 2020, Dunod, p. 38.

6 Morozov, E., *To Save Everything, Click Here: The Folly of Technological Solutionism*, 2014, PublicAffairs.

7 Marr, B., “Chinese Social Credit Score: Utopian Big Data Bliss or Black Mirror on Steroids?”, *Forbes*, 21 Jan. 2019. Available at: <https://www.forbes.com/sites/bernardmarr/2019/01/21/chinese-social-credit-score-utopian-big-data-bliss-or-black-mirror-on-steroids/>. It is noteworthy that art. 5 of the EU AI Act prohibits the use of AI systems for social scoring purposes leading to ‘detrimental or unfavourable treatment of certain natural persons’.

8 Assemblée Nationale, *Rapport d’information sur l’identité numérique*, 2020, pp. 41-42.

9 United Nations, *E-Government Survey 2020*. Available at: <https://publicadministration.un.org/egovkb/Data-Center> (Estonia ranked 3rd).

with minimal bureaucracy.<sup>10</sup> Consequently, when every citizen now may opt for public services beyond national borders, any government should ask itself if tomorrow its citizens might become ‘Estonians’.<sup>11</sup>

This digital competition places modern states under pressure to adopt algorithmic solutions in administrative decision-making to remain relevant and authoritative. Public decision-making must be objective, efficient, and user-friendly—a realm where algorithms offer potential solutions. However, it is crucial to retain a human-centric approach, ensuring legality, transparency, and accountability—standards not uniformly applicable to private actors, complicating algorithm implementation in the public sector.

## 2. *Why an act?*

The subsequent discussion delves into a point of ambiguity within the terminology. The aim here is to delineate a legal choice influenced by administration via an algorithm. With this in mind, the terms ‘decision’ or ‘decision-making’ are commonly employed. These terms dominate English literature on the subject<sup>12</sup> and are also prevalent in French discourse.<sup>13</sup> Legislative and regulatory sources, such as the GDPR on the European level, notably Article 22, address ‘automated individual decision-making, including profiling.’ This terminology has influenced French legislation, which includes provisions within the law ‘for a Digital Republic’<sup>14</sup> imposing safeguards for ‘an individual decision made on the basis of algorithmic processing’ by the administration.

The use of the term ‘decision’ seems logical as it aligns with the common law tradition<sup>15</sup> and highlights the pivotal role of algorithms in adjudication. Indeed, it focuses on

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10 E-Estonia, “E-Residency”. Available at: <https://e-estonia.com/solutions/e-identity/e-residency/>.

11 Champetier de Ribes, V. and Spiri, J., *Demain, tous Estoniens ? L’Estonie, une réponse aux GAFA*, 2018, Cent mille milliards.

12 Le Sueur, A., “Robot Government: Automated Decision-Making and its Implications for Parliament”, in Horne, A. and Le Sueur, A. (eds.), *Parliament: Legislation and Accountability*, 2016, Hart; Boix-Palop, A., “Algorithms as Regulations”, *European Review of Digital Administration & Law*, 2020, vol. 1, No. 1-2; Oswald, M., “Algorithm-assisted decision-making in the public sector”, *Philosophical Transactions of the Royal Society A*, 2018, vol. 376, No. 2128; Wagner, B., “Liable, but Not in Control?”, *Policy & Internet*, 2019, vol. 11, No. 1; Suksi, M., “Administrative due process when using automated decision-making in public administration”, *Artificial Intelligence and Law*, 2021, No. 29; Finck, M., “Automated Decision-Making and Administrative Law”, in Cane, P. et al. (eds.), *Oxford Handbook of Comparative Administrative Law*, 2020, Oxford University Press; Timmer, I. and Rietveld, R., “Rule-Based Systems for Decision Support and Decision-Making in Dutch Legal Practice”, *Droit et société*, 2019, No. 103; Cobbe, J., “Administrative law and the machines of government”, *Legal Studies*, 2019, vol. 39, No. 4; Coglianese, C. and Lehr, D., “Regulating by Robot”, *Georgetown Law Journal*, 2017, No. 105.

13 Bourcier, D., “Modéliser la décision administrative : réflexion sur quelques paradigms”, in *Le droit administratif en mutation*, 1993, PUF; Bourcier, D., *La décision artificielle : le droit, la machine et l’humain*, 1995, PUF; Girard, A.-L., “Volonté et décision administrative algorithmique”, in *Le droit administratif au défi du numérique*, 2019, Dalloz; Pauliat, H., “La décision administrative et les algorithmes : une loyauté à consacrer”, *Revue du droit public*, 2018, LGDJ; Duclercq, J.-B., “L’automatisation algorithmique des décisions administratives individuelles”, *RDP*, 2019, No. 2.

14 *Loi n° 2016-1321 du 7 octobre 2016 pour une République numérique*, art. 4; *Conseil constitutionnel*, 12 juin 2018, n° 2018-765 DC, § 71.

15 Craig, P., *Administrative Law*, 2021, 9th edn., Thomson Reuters. The term ‘act’ is notably absent from this work to describe administrative decisions.

how the algorithms may influence the legal choice of a bureaucrat, disregarding formal uses of digital technology, such as communication tools. However, we advocate for a less conventional term: an ‘act’. While this term is also employed in the context of algorithmisation—for instance, German legislation allows for a ‘[c]ompletely automated issuance of an administrative act’ in Section 35a of the Administrative Procedure Act,<sup>16</sup> and the term is occasionally used in literature<sup>17</sup>—it is less prevalent.

Nonetheless, ‘act’ better captures the phenomenon under study. ‘Decision’ is too restrictive, emphasizing the technical aspect of adjudication while overshadowing its legal context’s depth and breadth. The notion of ‘act’ encompasses the decision as a final legal prescription, the decision-making process, and much more.

Indeed, beyond a legal outcome and its production, the concept of an administrative act includes all legal consequences and guarantees implied by its binding nature, as analyzed in the preceding section. It encompasses the right to a fair trial, the right to an effective remedy, and the mechanisms of enforcement developed for classical administrative acts. Broadly speaking, for an algorithmic administrative act to be legally effective, it must conform to the general theory of administrative acts and the broader theory of legal acts, subject to the integrity of theoretical, jurisprudential, and legal corpus developed in Europe over centuries. This aligns with Maurice Hauriou’s assertion that ‘Administrative law is only concerned with acts.’<sup>18</sup>

Another point is specific to the French theory of administrative law, yet also relevant for the present topic. In France, the concept of an administrative act extends beyond legally binding decisions. It encompasses a broader category of ‘non-decisive acts’, such as circulars, guidelines, and opinions, closely resembling the notion of ‘soft law.’<sup>19</sup> These documents, while not inherently creating norms, rights, or obligations for citizens, may still be subject to judicial challenge if they are deemed to have ‘significant effects on the rights or situation of persons other than the agents responsible for implementing them.’<sup>20</sup>

In that respect, it may be assumed that acts generated by algorithms are not necessarily legally binding. One of the most promising applications of algorithms in administrative action is their use in nudging individuals’ behavior to foster more user-friendly and efficient interactions with governmental bodies, or to maintain public order. For example, automated systems could be employed to enact proactive government policies, such as notifying citizens about social benefits they are entitled to. An intriguing question is whether the legal interpretations provided by official chatbots or automated eligibility checks possess such ‘significant effects’.

In this context, it is noteworthy that an algorithm used to automate an administrative act could itself be qualified as an administrative regulation,<sup>21</sup> e.g. as an act. This stems

16 *Verwaltungsverfahrensgesetz*, § 35a.

17 Cossalter, P. and Mancosu, G., “L’impact du numérique dans la théorie de l’acte administratif, entre adaptations et ruptures”, in *Colloque “L’État digital”*, 25 March 2021, Université Paris 2 Panthéon-Assas; Buoso, E., “Fully Automated Administrative Acts in the German Legal System”, *European Review of Digital Administration & Law*, 2020, vol. 1, No. 1-2; Chiriac, L. and Blaj, S., “The Electronic Administrative Act”, *Curentul Juridic*, 2019, vol. 77; Mancosu, G., “Le contentieux des actes pris sur la base d’algorithmes, un point de vue italien”, *Revue générale du droit en ligne*, 2019, n° 49010.

18 Hauriou, M. and de Bezin, G., “La déclaration de volonté dans le droit administratif français”, *RTD civ.*, 1902, p. 546.

19 Tifine, P., *Droit administratif français*, 2018, 4th edn., Éditions juridiques franco-allemandes, p. 372 ff.

20 CE, Section, 12 juin 2020, n° 418142, *GISTI*.

21 Boix-Palop, A. (2020), “Algorithms as Regulations”, op. cit., p. 77 ff.

from the algorithm's role in predetermining the legal outcome of an administrative act before the legal situation arises. From this perspective, the algorithm exhibits elements of normativity, falling under the jurisdiction of administrative judges. This is similar for circulars and guidelines in French law, which may also be challenged in court due to their imposition of certain conduct on agents, limiting their discretion.<sup>22</sup>

### 3. *Why algorithmic?*

In legal discourse, several adjectives are used to describe the phenomenon under study. Four specific terms warrant attention: electronic, digital, automated, and algorithmic. Each carries a certain meaning and relevance to the object of this research.

Let's first address 'digital.' While initially chosen by the author and accepted by domain experts,<sup>23</sup> this adjective should be abandoned. Further research showed that the notion is too broad and nonspecific. However, an administrative act where an algorithm was used to adjudicate could also be called 'digital'. Put differently, it encompasses all situations involving computer assistance, irrespective of the nature of intervention, be it a governmental website, digitalized official documents, or tablet usage by an officer. This is the possible explanation why the French legislator entitled the law 'for a Digital Republic' in this way: the digital transformation of French administration is meant to improve all the aspects of state mechanisms to make it more accessible, efficient, and human-centric.<sup>24</sup> The same observation applies to the Italian Code of digital administration<sup>25</sup> that federates different aspects of digitalization such as open data, digital ID, interoperability and so on. Consequently, 'digital' fails to capture the essential changes in administrative decision-making brought about by algorithms.

The next term to consider is the term 'electronic' which seems to be closely related to 'digital' and often used interchangeably. This confusion is exemplified by terms like 'digital government' and 'electronic government' which are employed synonymously to describe ICT implementation in public services.<sup>26</sup> This is due to the same meaning of the word 'electronic': the Cambridge dictionary defines it as 'relating to computers or something that is done by computers.'<sup>27</sup>

From this perspective, the existing utilization of the 'electronic' prefix highlights the formal side of the notion: e-signature, e-democracy, e-residency, etc.—all these concepts refer to the transmission of information via digital tools. However, they do not presup-

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22 CE, Section, 18 décembre 2002, n° 233618, *Dame Duvignères*.

23 The thesis was presented under the title 'The Digital Administrative Act' at the Doctoral Consortium of the 18th International Conference on Artificial Intelligence and Law (ICAAIL), 2021, where it was awarded Best Paper. Available at: <http://www.iaail.org/?q=article/icail-2021-final-report>.

24 Ministère de la Transformation et de la Fonction publiques, *400 jours pour accélérer la transformation numérique de l'État*. Available at: <https://www.transformation.gouv.fr/la-ministre/actualite/400-jours-pour-accelerer-la-transformation-numerique-de-letat>.

25 *Codice dell'amministrazione digitale* (Italy).

26 See the OECD definition of digital government, available at: [www.oecd.org/gov/digital-government/](http://www.oecd.org/gov/digital-government/), and the UN definition of e-government, available at: <https://publicadministration.un.org/egovkb/en-us/about/unegovdd-framework>. See also Sénat, *Rapport d'information sur l'administration électronique au service du citoyen*, 2003, No. 402. Available at: <https://www.senat.fr/rap/r03-402/r03-402.html>.

27 Cambridge Dictionary, "Electronic". Available at: <https://dictionary.cambridge.org/dictionary/english/electronic>.

pose the production of new information by algorithms: e-democracy does not enable an algorithm to execute voting rights. In a similar fashion, the electronic administrative act may be associated with its paperless adoption—the way the term is used in European national legislations.<sup>28</sup> Thus, it does not encompass the essential changes in the administrative decision-making caused by algorithms.

‘Automated,’ on the other hand, enjoys widespread usage in both literature and legislation,<sup>29</sup> particularly inspired by the GDPR provisions concerning ‘decisions based solely on automated processing’ (art. 22) where ‘processing’ means ‘any operation or set of operations which is performed on personal data or on sets of personal data’ (art. 4). This term aptly describes the role of algorithmic intervention in substituting ‘manual’ human involvement in decision-making processes. Thus, it could be, and it is rightfully used to name the phenomenon in question. However, it is argued here that the adjective ‘automated’ fails to capture the essence of algorithmic influence comprehensively.

The first reason is of a semantic nature. The term ‘automated’ emphasizes the absence of humans in the decision-making, but this approach is more procedural than legal. Hypothetically, an action can be automated by different means, and algorithmic intervention is not always necessary. By contrast, the adjective ‘algorithmic’ narrows the object of research, limiting it to the growing role of algorithms in administrative decision-making and the outcomes they produce, acknowledging their potential qualification as administrative acts.

The second reason is mostly methodological and concerns the representation of administrative acts. Calling an act ‘algorithmic’ implies that the decision-making process is deconstructed and then modeled as a sequence of legal operations. The act becomes an algorithm itself. Notably this is where an ontological problem arises: one may algorithmize and automate a decision-making process, but a legal act cannot be completely automated. Its adoption is impossible without certain subjective aspects, and there is no way to precisely describe them in terms of computer algorithms. The administrative act is an expression of will and the emanation of state power in the public interest, concepts too abstract to be calculated or represented as a sum of ones and zeroes. It necessitates subjective human input, making them inherently resistant to complete automation. Even when the adoption of an act is completely automated, the human intervention *ex ante* (during the conception of an algorithm) and *ex post* (by a human-on-the-loop or by a judge) are inevitable.

With this in mind, one may suppose that the act is rather algorithmized than algorithmic. Indeed, the possible degree of algorithmization could vary greatly, but the legal framework applied and the guarantees imposed should be equal for every case of algorithmic participation in decision-making. As entities should not be multiplied beyond necessity, the neater designation ‘Algorithmic Administrative Act’ is preferred. Terminological clarity, however, does not resolve the difficulty of definition. Defining the algorithmic administrative act is a more demanding exercise than naming it: it requires identifying, among the manifold forms of algorithmic intervention in public decision-making, the attributes that are both necessary and sufficient to characterize the phenomenon as a distinct legal category.

28 See art. L212-2 of the French *Code des relations entre le public et l’administration*; *Verwaltungsverfahrensgesetz*, § 37(2).

29 See references cited *supra*, fn. 12.

## II. Algorithmic Administrative Act: a Concept to Define

The definition of an algorithmic administrative act must address two primary considerations. Firstly, it should encompass the foundational principles that were previously discussed during the formulation of the concept. This requires taking into account the countless scenarios in which algorithms contribute to decision-making. Secondly, it must incorporate key aspects of the conventional definition of an administrative act. However, pinpointing and integrating only those aspects that delineate its algorithmic character as a distinct phenomenon, thereby highlighting the legal challenges faced by administrative law, constitutes a considerable challenge. The difficulty is compounded by the absence of any settled definition of the administrative act itself—neither in European doctrine,<sup>30</sup> nor in national legislation, nor indeed in legal literature, notably in jurisdictions like France.<sup>31</sup> Consequently, numerous authors identify and emphasize different attributes and criteria, depending on the focus of their respective studies. The present article adopts the same approach.

In this regard, the commonly used French definition of an administrative act as an act subject to challenge in an administrative court does not find applicability here.<sup>32</sup> In fact, the use of algorithms in decision-making is changing the way administrative acts are assessed, since judges—at least without further assistance—no longer have insight into the inner workings of the black box that generates the results. However, the admissibility of the appeal no longer defines the intrinsic nature of an act. Its algorithmic nature is not contingent upon judicial interpretation; rather, the judge now serves primarily as an ex-post arbiter of legality. Thus, the identification of an algorithmic administrative act cannot hinge on its contestability—it must be contestable by definition. So, what constitutes this definition? Three groups of attributes may be discerned.

### 1. Objective attributes

The primary attribute, as previously mentioned, is that the algorithmic administrative act is akin to any other administrative act in the legal realm.<sup>33</sup> In simplified terms, such a decision manifests as a form of syllogism,<sup>34</sup> wherein existing legal prescriptions are applied to a factual scenario to draw a conclusion. For instance, when an individual seeks an

30 Although a definition may be found in art. 2(1)(g) of Regulation (EC) No 1367/2006 of the European Parliament and of the Council of 6 September 2006 on the application of the provisions of the Aarhus Convention, which defines an administrative act as ‘any measure of individual scope under environmental law, taken by a Community institution or body, and having legally binding and external effects’.

31 de Corail, J.-L., “Acte administrative”, in Alland, D. and Rials, S. (eds.), *Dictionnaire de la culture juridique*, 2003, Lamy-PUF, p. 11.

32 Chiffot, N., Chrétien, P. and Tourbe, M., *Droit administratif 2018-2019*, 16th edn., Sirey, p. 576; Frier, P.-L. and Petit, J., *Droit administratif*, 2017, 11th edn., LGDJ, p. 347.

33 de Bellescize, R., *Droit administratif général*, 2018, 6th edn., Gualino, p. 165; Delamarre, M., Paris, T. and Chavrier, A.-L., *Leçons de droit administratif général*, 2014, 2nd edn., Ellipses, p. 141; Defoort, B., *La décision administrative*, 2015, LGDJ, BDP, t. 286, p. 48; *Verwaltungsverfahrensgesetz*, § 35; Autexier, C., “Les actes de l’administration à caractère de droit public”, in *Introduction au droit public allemand*, 1997, PUF, reprinted in *Revue générale du droit en ligne*, 2015.

34 Ross, A., “Imperatives and Logic”, *Theoria*, 1941, vol. VII–VIII, trans. Millard, E. and Matzner, E., in Ross, A., *Introduction à l’empirisme juridique*, 2023, LGDJ, pp. 39–59, at p. 58.

allowance, an agent assesses whether their salary, family situation, or health aligns with the parameters stipulated by social security law.

In this scenario, the algorithm operates as a living syllogism,<sup>35</sup> proficiently extracting legal information from various sources as input<sup>36</sup> and qualifying them as numbers of legal facts.<sup>37</sup> These facts may be automatically compared with the requirements of legal norms previously encoded,<sup>38</sup> with the objective of producing a legal conclusion as output.

The realm of administrative law is particularly promising to this approach due to its distinct logic.<sup>39</sup> In the context of individual administrative decisions, administrative action typically involves a reactive process: a decision-maker evaluates whether the legal situation conforms to a predetermined law rather than actively seeking applicable laws to regulate the discovered facts.<sup>40</sup> While the simplistic view of legal decisions as syllogisms has often been criticized as overly restrictive or even obsolete, administrative law offers numerous instances where an algorithmic comparison of two premises—where one (a norm) exists in code and the other (the fact) encompasses a limited range of scenarios—is sufficient to arrive at a ‘legal’ conclusion.

However, the algorithmic administrative act is not limited to individual decisions; its second attribute lies in its potential to extend beyond the individual realm. Historically, regulations have been categorized as administrative acts in French legal doctrine,<sup>41</sup> and algorithms can also significantly influence their formulation. At its basic level, this influence entails data gathering and analysis.<sup>42</sup> In a more sophisticated application, algorithms may propose solutions or policies based on analyzed data. In addition, algorithms can be used to dynamically adjust the scope and provisions of regulations in real time, for example, to set emission limits or speed limits based on current data. If the data flow is continuous and sufficiently precise, algorithms can even generate personalized prescriptions based on the algorithmized regulation, marking the inception of the theory of micro-directives.<sup>43</sup>

35 Duclercq, J.-B. (2019), “L’automatisation algorithmique des décisions administratives individuelles”, op. cit., p. 298.

36 Loza Mencía, E., “Segmentation of Legal Documents”, in *Proceedings of the 12th International Conference on Artificial Intelligence and Law (ICAIL ’09)*, 2009, ACM, pp. 88-97; Chalkidis, I., Androutsopoulos, I. and Michos, A., “Extracting Contract Elements”, in *Proceedings of ICAIL ’17*, 2017; Rouvroy, A. and Berns, T., “Gouvernementalité algorithmique et perspectives d’émancipation”, *Réseaux*, 2013, No. 177, pp. 163-196.

37 Duclercq, J.-B. (2019), “L’automatisation algorithmique des décisions administratives individuelles”, op. cit.; Laussucq, F. and Labbani Narsis, O., “50 nuances de mots : du robot ou du juriste, qui porte la cravache ?”, in Pellegrini, F. (ed.), *Actes du colloque des Convergences du Droit et du Numérique*, 2019, p. 81 ff.

38 Shay, L., Hartzog, W., Nelson, J. and Conti, G., “Do Robots Dream of Electric Laws? An Experiment in the Law as Algorithm”, in Calo, R., Froomkin, A.M. and Kerr, I. (eds.), *Robot Law*, Edward Elgar, 2016, pp. 274-305; Waddington, M., “Machine-Consumable Legislation: A Legislative Drafter’s Perspective”, *The Loophole – Journal of the Commonwealth Association of Legislative Counsel*, 2019, p. 42.

39 Rivero, J., “La distinction du droit et du fait dans la jurisprudence du Conseil d’État français”, in *Le fait et le droit. Études de logique juridique*, Bruylant, 1961, p. 130 ff, esp. p. 138; Vautrot-Schwarz, C., *La qualification juridique en droit administratif*, pref. Truchet, D., 2009, LGDJ.

40 Yannakopoulos, C., “L’apport de la notion de fait administratif institutionnel à la théorie du droit administrative”, *Revue interdisciplinaire d’études juridiques*, 1997, No. 38, p. 24 ff.

41 Tifine, P. (2018), *Droit administratif français*, op. cit., p. 425 ff.

42 Auby, J.-B. and De Gregorio, V. (eds.), *Données urbaines et smart cities*, 2017, Berger-Levrault; Pellegrini, F., “Intelligence artificielle, mégadonnées et gouvernance”, *Revue Lamy Droit de l’immatériel*, 2018, pp. 56-59.

43 Casey, A.J. and Niblett, A., “Self-Driving Laws”, *University of Toronto Law Journal*, 2016, vol. 66, pp. 429-442; Casey,

As forms of legal implementation, both individual and regulatory administrative acts are undergoing change under the influence of algorithmic intervention. On one hand, individual acts become less personalized, as a single algorithm may predetermine legal outcomes for (almost) all conceivable cases. On the other hand, regulations may become increasingly precise and tailored to enhance efficiency, blurring the traditional boundaries between regulatory and individual action. Consequently, this categorization of acts loses its meaning as it no longer reflects the degree of legal concretization.

The algorithmic act may continue to function once a legal conclusion is reached and may even become self-enforcing. Similar to any legal act, its ultimate objective is to modify the legal order by creating rights or imposing obligations.<sup>44</sup> Analyzing the implementation of algorithms by the administration is only meaningful if they yield legal consequences. Furthermore, these consequences extend beyond the administration itself—they impact external entities. The safeguards established for administrative acts stem from their impact on citizens' rights, and conversely, administrative acts, including their algorithmic forms, are adopted to govern the administered reality.

## 2. *Subjective attributes*

Where there is a goal, there is also a purpose. Like any legal act, the administrative act is an expression of will.<sup>45</sup> It does not emerge spontaneously; there is always a creative force behind it. The unilateral nature of the administrative act is its defining characteristic; unlike contracts, it is exclusively based on the will of the administrative authority, yet its legal consequences are binding on the other party. Algorithmization adds complexity: ostensibly, a piece of code lacks intentionality, yet an act cannot be adopted without it.

The resolution lies in a temporal shift in its genesis. Normally, a street-level bureaucrat unconsciously interprets the legislator's will and applies it to specific situations. However, in the case of 'algorithmic' will, it must be encoded and integrated into the algorithm during its development process. Thus, there exists any impetus to the act as a particular decision. Consequently, the algorithm may indeed serve as the 'mouth of the law,' embodying the implemented will, but its true authorship is debatable when the AI solution is provided by a private contractor.<sup>46</sup> This assumption emphasizes the need for close supervision of the development process, particularly given the authoritative nature of administrative acts.

Indeed, in adopting an act, a public authority exercises its prerogatives of power.<sup>47</sup> This implies that every official body and agent has their competence defined by law or secondary legislation. However, algorithms disrupt this order: developed by one authority, certified by another, used by a third, and potentially reused by yet another. Even if an act is not completely automated, human decision-makers are significantly influenced by algorithmic conclusions, blurring clarity on where, when, and by whom the act was truly adopted.

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A.J. and Niblett, A., "The Death of Rules and Standards", *Indiana Law Journal*, 2017, vol. 92, No. 4, p. 1 ff.

44 de Corail, J.-L. (2003), "Acte administrative", op. cit., p. 11; Etien, R. and Masclat, J.-C., *Droit administratif général*, 2007, Foucher, p. 21 ff.

45 Ibid.

46 A textbook example is the COMPAS system used in the United States to predict recidivism risk, whose methodology was treated as a trade secret. See *Loomis v. Wisconsin*, 881 N.W.2d 749 (Wis. 2016), cert. denied, 137 S. Ct. 2290 (2017).

47 See references cited supra, fns. 30 and 41; Tifine, P. (2018), *Droit administratif français*, op. cit., p. 359.

Public power also entails a degree of discretion when adopting an act. Decision-makers may exhibit varying degrees of subjectivity in qualifying case facts or determining the opportunity of the decision itself. This degree of subjectivity can range from well-defined decisions where no discretion is permissible to instances where administrators engage in nearly creative endeavors. However, algorithms currently struggle with real creativity and subjective assessments. Encoding standards such as ‘public interest’ or ‘professional integration’ in a manner specific enough to give a definite answer to every particular case proves challenging, if not impossible. Machine-learning algorithms may assess the likelihood of such matches, but the legitimacy of their evaluations remains doubtful and requires human confirmation.<sup>48</sup>

### 3. *Procedural attribute*

All previously discussed elements are universal to any administrative act but are profoundly influenced by digitalization. This brings us to the final substantial attribute of the algorithmic administrative act: algorithm participation.<sup>49</sup> This participation, though essential for qualifying an act as algorithmic, can manifest itself in various forms.

Firstly, as observed, the degree of algorithmization may vary based on the complexity of the act. Following the deconstruction of the decision-making process, the administration may opt to partially automate only certain steps, such as the qualification of specific facts, or automate the entire process, contingent upon feasibility and appropriateness. Nonetheless, any form of participation entails the same guarantees and legal consequences of algorithmic decision-making.

Secondly, different algorithms may be employed to achieve intended outcomes. Depending on decision-making complexity, administrations could utilize relatively simple non-AI algorithms for routine, legally bound acts, while more sophisticated algorithms, leveraging machine learning, may be developed to handle discretionary matters.

Although not constitutive of the category, the algorithmic administrative act is subject to the principle of legality, ensuring the possibility of litigation. This means that the algorithm’s source code must comply with the law, and the encoded rules become a part of the legal system.

Combining these facets, we may define the algorithmic administrative act as a legal decision, whether individual or regulatory, unilaterally adopted under the exercise of public authority to yield external legal effects, substantively influenced by an algorithm.

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48 See references cited *supra*, fn. 43.

49 Cossalter, P. and Mancosu, G. (2021), “L’impact du numérique dans la théorie de l’acte administratif, entre adaptations et ruptures”, *op. cit.*