

# **Automation, Artificial Intelligence and Sound Administration**

## **A Few Insights in the Light of the Spanish Legal System\***

**Isaac Martín Delgado**

(Full Professor of Administrative Law - Head of the Center for European Studies “Luis Ortega Álvarez” University of Castilla-La Mancha)

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**ABSTRACT** In a context of increasing technologicalisation of the organisation and procedures of our public administrations with a clear impact on citizens' rights, particularly through the use of artificial intelligence, it is convenient to consider whether our legal standards are still valid and to reflect on how to regulate the implementation of this technology in the public sector. With this approach as a premise and taking into account the principle of sound administration, this paper analyses the application of the transparency legal requirements to the algorithmic administrative activity in order to identify aspects that could be improved and adds some considerations that could help to strengthen the transparency of the algorithmic systems.

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### **1. Introduction**

#### **1.1. The big challenge for legal scholars**

Artificial intelligence (“AI”) is a transformative and disruptive technology that is impacting all areas of society and will continue to do so in the near future, including public sector.<sup>1</sup>

Since it emerged as a scientific discipline in the 1950s, it has evolved, sometimes rapidly and sometimes more slowly, until its recent exponential development, which is due to three main factors: (i) the increase in the amount of available data (AI feeds off data); (ii) the increase in computing power and storage capacity; and (iii) the development of new techniques. However, it is noticeable that the use and implementation of AI is more widespread within the private sector—commerce, financial services, tourism,

industry and the media—than within the public sector. This is not new, since it often takes public authorities longer to embrace new developments and public law is less flexible than private law. Nevertheless, it is somewhat surprising that even official documents on AI focus more on business and society than on public authorities.

Public administration also needs a digital transformation and, above all, public authorities must assess how to apply AI tools and techniques to their organization in order to streamline their relationship with citizens, enhance digital public services, and minimize the risks attached to AI.

The previous scholarly analysis on the implementation of ICTs—and, in particular, on the public-sector use of AI—must rise to the challenge and remain close to reality. However, admittedly, this field of study has been pushed into the background until recently. Some have argued that it is highly technical and has little impact on what really matters in administrative law. Interestingly enough, there were pioneering insights by the time AI began to appear and develop, both in Spain and in neighboring countries. In 1984, V. Frosini examined administrative automation as “the embracement by public authorities of the methods and instruments of current information technology with a view to applying them to public administration.” This 1984 work includes meaningful insights on each and every one of the challenges that now concern legal scholars: the transformative

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Isaac Martín Delgado

power of software-managed information; the much-needed reshaping of civil service and the re-organization of tasks and duties; the translation of legal code into computer code; the transparency of administrative action; the liability for machine malfunctioning; and the review of automated or computer-based administrative activity, along with the potential risks attached for the legality principle, individual rights and the independence of public authorities from businesses, considering that the powerful tend to get more powerful, even if they incur in wrongdoing.<sup>2</sup> The studies by A. Massucci and G. Duni in Italy were also groundbreaking and remain current.<sup>3</sup>

The greatest challenge at this point is to find the links and connections between AI and public administration. Then, we must ask ourselves a twofold question about how these new technologies can help and whether our set of administrative law rules remains applicable and useful or we must create a new one. To address these questions properly, the starting point must be our current practical reality and the state of the art. We should ask realistic questions, not futuristic<sup>4</sup> ones, searching for

useful answers in this context.

In fact, “legal scholars cannot be oblivious to these realities, which are not mere speculation about imaginative futurism.”<sup>5</sup> We must approach AI in a realistic and demystified manner, considering AI’s current features, since speculating about the future—apparently more interesting than down-to-earth views—cannot be at the expense of being distracted from the important policy issues raised by AI technology today.<sup>6</sup> This scholarly view should also be fair and unbiased, because algorithms are not good or bad *per se*. The actual and potential effects of algorithms depend on their application.<sup>7</sup> In this regard, it is necessary to keep in mind that a significant number of AI projects end up as prototypes and simulations that cannot be applied or implemented for several reasons, including their high cost or the ethical and legal implications,<sup>8</sup> also to note that, as a matter of principle, digital government can work in the same way as traditional government.<sup>9</sup> On top of this, AI is not as developed as to be considered intelligence *stricto sensu*; the results and outcomes delivered by the AI systems that are being created in the public sector field are useful, but not intelligent. Undoubtedly, these useful outcomes are relevant and remarkable, mostly because they

<sup>2</sup> V. Frosini, *Informática y Administración Pública*, in *Revista de Administración Pública*, No. 105, 1984, 447 ff. Also at this time there were approaches that warned about the use of computers. See T.-R. Fernández, *Jurisprudencia y computadores*, in *Revista de Administración Pública*, No. 64, 1971, 327-336. The approach can be summarized as follows: “Reading this (i.e., a computerized case law project) is terrifying. Major issues like applicability or interpretation are going to be solved by a computer, who will decide which rule to apply, which pieces of legislation remain in force and which provisions have been repealed” (p. 331). The author concludes with a warning: “I do not categorically deny that computers may be valid and helpful in this field (time and third-party experiences will tell, while drawing specific boundaries). However, we must now point to the risks and concerns to mitigate this wave of *a priori* enthusiasm and naive pro-machine optimism, particularly in such a legally formalistic country like Spain” (p. 335).

<sup>3</sup> G. Duni, *L'utilizzabilità delle tecniche elettroniche nell'emanazione degli atti e dei procedimenti amministrativi. Spunto per una teoria dell'atto emanato in forma elettronica*, in *Rivista amministrativa della Repubblica Italiana*, No. 129, 1978, 407 ff.; A. Masucci, *L'atto amministrativo informatico. Primi lineamenti di una ricostruzione*, Naples, Jovene, 1993.

<sup>4</sup> There are articles taking this futuristic approach, discussing if there will be fundamental rights in an AI-dominated world when individuals be sidelined or if algorithms should be granted rights. See e.g., E.J. Urbina Mendoza, *El Derecho público del algoritmo. Reflexiones sobre la transición de la modernidad jurídica crítico/lineal a la cuántica/fractal*, in *Revista de Derecho Público*, No. 161/162, 2020, 11 ff.; and G.

Osés, *Algoritmos con derechos*, in *Diario 16*, 8 December 2020, available at <https://diario16.com/algoritmos-con-derechos>. The author claims that algorithms are 21<sup>st</sup> century slaves and should be granted rights. These works contribute to the reflection on the future that can result from the public-sector use of AI, but they are not really helpful from a regulatory perspective. This paper does not embrace that approach.

<sup>5</sup> The quote is from J.L. Villar Palasí, who wrote it, along with the following, in 1978: “Right now this is not about futurism, but rather about a current issue with ample room for development.” See J.L. Villar Palasí, *Aspectos jurídicos y políticos de la Telemática*, in *Revista Española de Derecho Administrativo*, No. 19, 1978, 501. This scholarly article also stresses the potential risks of new technologies, focusing on the loss of fundamental freedoms (p. 502).

<sup>6</sup> H. Surden, *Artificial Intelligence and Law: An Overview*, in *Georgia State University Law Review*, No. 35, 2019, 1306-1307.

<sup>7</sup> H. Fry, *Hola mundo. Cómo seguir siendo humanos en la era de los algoritmos*, Barcelona, Blackiebooks, 2019, 4.

<sup>8</sup> A. Fernández Gil, *Introducción* to M. Moreno Rebato, *Inteligencia Artificial (Umbrales éticos, Derecho y Administraciones Públicas)*, Cizur Menor, Aranzadi, 2021, 13.

<sup>9</sup> A. Huergo Lora, *Una aproximación a los algoritmos desde el Derecho Administrativo*, in A. Huergo Lora (ed.), *La regulación de los algoritmos*, Madrid, Thomson-Aranzadi, 2020, 26.

often allow to achieve results that are beyond the human mind.

### **1.2. A few preliminary questions**

Modernizing or innovating public administration through technology is not only about technology or law. It requires an all-encompassing and multidisciplinary approach, without any preconceptions or biases, based on an opening question: If they are allowed in the private sector, why shouldn't we bring technological developments into the public sector? Asking this question does not entail overlooking the major differences between both areas for the purpose of implementing AI developments. Rather, the question is aimed at highlighting that public authorities are not being efficient with the large bulks of data they generate, collect and store in the discharge of their duties, seeking to fulfill individual rights and pursuing general interest objectives.

On top of this, we need a second opening question: What would be the point of incorporating disruptive technologies and their transformative power into the various levels of government or public administration? This question does not refer to the overall purpose, but to the aims in the specifics. A quick glimpse shows that public authorities are starting to use these tools when they exercise their powers to limit or restrict individual rights, i.e., for enforcement purposes, and not really for the benefit of citizens. For instance, in Spain, Royal Decree-Law 2/2021, of 26 January, on Employment Protection, provided for automating penalties. As a result, the Employment Penalties and Infringement Act allows public authorities to issue inspection reports in an automated manner.<sup>10</sup> This has been further implemented by Royal Decree 688/2021, of 3 August, amending the Regulation on penalties for employment-related infringements and records for social security settlements. So, right now, public authorities can initiate sanctioning proceedings that be processed in an automated

manner all along, until a penalty is imposed for an infringement, provided that the party concerned does not appeal or otherwise challenge the penalty. During all these proceedings there is no human intervention at all.

There is no doubt that public authorities are responsible for monitoring and enforcing infringements, but there is more to it. Assuming that the public administration (i.e., broadly, government) is a social organization serving the general interest, we must demand that innovation be aimed at (i) fulfilling citizens' rights and interests; and (ii) providing public services as efficiently as possible, since this is what justifies government's existence. The principles of effective public service, simplicity, transparency and proximity, laid down in Article 3(1) of Act 40/2015, of 1 October, on Public Authorities ("LRJSP"), do not only refer to penalties, taxes or social security inspections. Public authorities are legitimate vis-à-vis individuals (citizens) by being helpful to them. If public bodies are useless, what role would be left for them and how would they be considered in a context where intermediaries tend to disappear? Just like the *homo digitalis* entails a major change in the way humans interact with the world around them, there is a real risk that digital citizens end up regarding public authorities as an obsolete burden from the past which is completely unnecessary in a post-digital revolution world.

Having asked about why we should incorporate AI into the public sector, and the ultimate purpose thereof, there is a final preliminary question connected with the other two: How should we use AI for government-citizen relationships? AI promises absolute objectivity and effectiveness, but its implementation can be at the expense of citizens' freedoms. Algorithmic determinism,<sup>11</sup> absolute enforcement, serving the general interest rapidly and effectively, with no mistakes or shades of gray, and full legal certainty, are all appealing notions. However, to what extent are they compatible with freedom construed as free individual self-determination under Article 10 of the Spanish Constitution?

<sup>10</sup> For a comprehensive analysis, see J.M. Goerlich Peset, *Decisiones administrativas automatizadas en materia social: algoritmos en la gestión de la Seguridad Social y en el procedimiento sancionador*, in *Labor*, vol. 2, No. 2, 22-42. See also, A. Todolí Signes, *Retos legales del uso del big data en la selección de sujetos a investigar por la Inspección de Trabajo y de la Seguridad Social*, in *Revista Galega de Administración Pública*, No. 59, 2020, 313-337.

<sup>11</sup> J.M. Lasalle, *Ciberleviatán, El colapso de la democracia liberal frente a la revolución digital*, Barcelona, Arpa, 2019, 78.

Isaac Martín Delgado

Taking a different perspective, which could be considered “internal,” we have noticed that law, i.e., legislation, has clearly lost its once prominent guiding role in the implementation and application of AI systems by public authorities. This is because (i) both at an EU and domestic level, authorities focus on guidelines, strategies and ethics rather than on regulation; and particularly because (ii) law is sometimes regarded as an obstacle than can hinder AI’s transformative potential. In practice, algorithms can replace legal provisions,<sup>12</sup> either by action or omission. They would replace legislation by action if lawmakers willingly decide to take a *lawless* approach to the public-sector use of AI, to the requirements applied to the design of algorithmic systems or to the guarantees of citizens’ rights, letting ethics and self-regulation take over. Algorithms would replace legislation by omission if lawmakers and governments fail to exercise their regulatory and decision-making powers.

In sum, given the increased use of different technologies for law enforcement by public authorities, it is safe to say that the role of computer programming and software must be under a careful study—and even subject to regulation—thus being essential to carry out an in-depth analysis of all the related challenges. We must not overlook the fact that computer code can interfere with legal code.<sup>13</sup>

We are undergoing a digital transition, with very few rules specifically designed to tackle the challenges posed by disruptive technologies, which is confusing and creates legal uncertainty about how to solve the issues before us. This is why academia must rise to the challenge.

Based on these premises, the analysis provided below focuses on formal administrative activity within administrative procedures. Admittedly, AI can be both useful and risky in other areas of administrative action. However, administrative procedure is the best testing ground for the hypotheses

included in the above premises. Note that administrative law is mostly made up of procedures, and many of its core principles (good faith, impartiality, equity, rationality, accessibility, transparency, accountability or participation) are procedural in nature.<sup>14</sup> On top of this, ICTs’ main transformative effect impacts decision-making procedures. Therefore, we must (i) rethink our legal categories and regulatory parameters; (ii) appropriately assess which of their features must be strengthened to preserve our achievements in terms of the legality and legitimacy of administrative action vis-à-vis citizens and in the fulfillment of general interest objectives; and (iii) determine whether we need new principles and safeguards.

More specifically, in order to put into practice this approach to administrative law-AI relationships, our insights and analyses will focus on one (major) requirement regarding the implementation of AI in administrative activity: transparency. But first we will discuss (i) the concept of AI as applied to public administration; and (ii) the relevant framework or context, since both (i) and (ii) bring along major requirements and implications for the subject-matter examined herein.

## 2. Concept and context: automating administrative activity

Gaining a full legal understanding and ultimately embracing a reality requires a definition that includes the reality’s main dimensions, in order to come up with an appropriate legal framework. However, in order for this definition to be a lasting one, it must be flexible enough, particularly if it refers to concepts that evolve very rapidly, like AI.<sup>15</sup>

In simple terms, although there are very different scholarly definitions of AI, we can define this concept as follows: AI is any human-made rational agent that decides and acts based on perception,<sup>16</sup> processing information to deliver an outcome through a

<sup>12</sup> Lasalle rightly points out that “algorithms cannot be the law by default of national legislation,” J.M. Lasalle, *Ciberleviatán*, 158.

<sup>13</sup> In line with this approach, see T. Wu, *Will artificial intelligence eat the law? The rise of hybrid social-ordering systems*, in *Columbia Law Review*, vol. 119, No. 7, 2001-2028. See a comprehensive analysis in a specific area of action from this perspective in E. Micheler and A. Whaley, *Regulatory technology: replacing Law with computer code*, in *Law, Society, Economy Working Papers*, No. 14, 2018, 1-28.

<sup>14</sup> C. Harlow and R. Rawlings, *Proceduralism and automation: challenges to the values of Administrative Law*, in *Law, Society, Economy Working Papers*, No. 3, 2019, 2.

<sup>15</sup> In this vein, see M. Moreno Rebato, *Inteligencia Artificial (Umbrales éticos, Derecho y Administraciones Públicas)*, Cizur Menor, Aranzadi, 2021, 13.

<sup>16</sup> S. Russell and P. Norving, *Artificial Intelligence, a modern approach*, III ed., Upper Saddle River, N.J, Prentice Hall, 2010, 1-2.

human-like reasoning. What makes AI worthy of the adjective “intelligent” is the ability of perceiving, and even transforming, the environment.

Broadly, AI is a scientific discipline comprising several complex techniques—machine learning, automated reasoning and even robotics—which allow to design and implement software and hardware that make decisions or help in decision-making based on the processing and interpretation of data. Currently, it is hard to understand intelligence as human intelligence, i.e., having human-like skills.

A meaningful analysis of algorithms and administrative action requires examining the concepts and the implications of using them within the scope of public administration.

Merriam-Webster's Dictionary defines algorithm as a “step-by-step procedure [involving a finite number of steps that frequently involves repetition of an operation] for solving a problem or accomplishing some end.” When applied to the field of AI, algorithms perform the same function although based on logical instructions or commands translated into computer code<sup>17</sup>—where these instructions are either fully created by humans and operate directly and unambiguously, or partially generated by the system—but without understanding the information they handle as a human being would. In fact, depending on the task, it is irrelevant whether the machine understands the knowledge that is being generated. What really matters is that the machine's probabilistic or statistical approach stemming from the computer processing of large datasets be suitable for the end pursued. So, the more codifiable the processes, the more efficient and useful the algorithmic systems will be. And, precisely because of this, in order to truly understand the system's underlying rationale, we need to learn its real objectives.<sup>18</sup>

Algorithmic administrative action primarily refers to the activity performed through systems that involve algorithmic processes to automate human decision-making,<sup>19</sup> whether totally or partially.<sup>20</sup> This

definition would include both fully programmed automation and the use of AI *stricto sensu*. However, we must draw a distinction between the two. In the first case, the machine's output expresses the human will, anticipated through previous programming (thus being a different way of expressing a will, since the programming responds to the programmer's commands), summarizing regulatory criteria, turned into algorithms, and leading to the final decision through a predetermined logical and conditioned sequence. In the latter case, it is not merely about programming. Rather, it involves “thinking,” i.e., the ability to form a judgment or an opinion about something, and to follow autonomous intellectual processes.<sup>21</sup> In fact, machine learning allows to generate predictions or forecasts through self-learning systems, and learning is a sign of intelligence because it is required to be intelligent.<sup>22</sup> These algorithms are not deduction-based. Rather, they make probabilistic predictions. Therefore, they are more capable of representing the real world.

Nevertheless, we are discussing programming, and thus the optimization of systems to accomplish specific goals based on data and sorting processes. Simply put, their huge potential to generate knowledge is offset by blatant “narrow perceptual abilities.”<sup>23</sup> However, these systems can have such a tremendous impact that could end up having more significant effects on society than human-made decisions, since these human-

2019, available at <http://dx.doi.org/10.2139/ssrNo.3226913>, 3.

<sup>20</sup> A. Huergo Lora makes a difference between automated administrative action and algorithmic predictions. In his view, there is automated action without AI, just like there is AI that does not involve automated action. He is right. However, in this paper, the term automation is used to mean the reproduction of intellectual processes by machines through information systems, regardless if they are used to adopt administrative acts or decisions—whether final or non-final procedural resolutions—or to obtain relevant information based on data. See A. Huergo Lora, *Administraciones Públicas e inteligencia artificial: ¿más o menos discrecionalidad?*, in *El Cronista del Estado Social y Democrático de Derecho*, No. 96-97, 78-95.

<sup>21</sup> “Algorithmic system,” “IA system” or “algorithm” are used interchangeably in this paper to refer to human-designed software in order to solve problems by interpreting data.

<sup>22</sup> A.M. Turing, *Computing Machinery and Intelligence*, in *Mind*, No. 59, 1950, 433 ff.

<sup>23</sup> D. Cardon, *Con qué sueñan los algoritmos*, 13, 21 and 58.

<sup>17</sup> L. Lessig, *Code and other laws of cyberspace*, New York, NY, Basic Books, 1999.

<sup>18</sup> D. Cardon, *Con qué sueñan los algoritmos*, Madrid, Ediciones Dado, 2018, 81.

<sup>19</sup> J. Cobbe, *Administrative Law and the Machines of Government: Judicial Review of Automated Public-Sector Decision-Making*, in *Legal Studies*, vol. 39,

Isaac Martín Delgado

manufactured systems shape us, because they have the ability to organize and steer our reality. In other words: what is real becomes more easily manipulated.<sup>24</sup> There is a second negative impact related to this large computational capacity: the exponential increase in the amount of data exceeds human assimilation, which makes machines indispensable, thus making us overly dependent on them.<sup>25</sup>

Ultimately, we are experiencing a transformation process in which there are fewer human decisions relying on human-obtained information. These decisions are being replaced by decisions based on machine-provided information. This process also affects public authorities.

In this context, note that the concept of AI refers to the technology that makes machines “intelligent,” reproducing or imitating some human intellectual skills. This has many potential applications, e.g., robotics, process automation or decision-making. A set of algorithms is a code, a sequence of instructions for problem solving that transforms data into knowledge in order to make decisions. An algorithm’s main functionality is that it “letting the data speak”<sup>26</sup> because it searches for data and identifies action patterns and correlations between the data and the desired outcome. In sum, machines learn to generate data-driven descriptions, predictions and prescriptions—and thus knowledge. The decision is not made by a program based on certain algorithms. Instead, the decision is explained by the data or, in other words, the decision gives meaning to the data.<sup>27</sup> Not all legal problems can be solved with algorithms, because many legal issues require intuition and not only analytical abilities.<sup>28</sup> But administrative law leaves much

room for factual administrative action (e.g., controlling traffic through AI-powered traffic lights, drone surveillance of public areas, road surface marking or land surveys for expropriation purposes) and formal activity (e.g., deciding which companies must be subject to tax inspections, appointing public officials to regional bodies, awarding subsidies or monitoring regulatory non-compliance risks), which can be optimized through algorithms.

So, keep in mind that there are various types of administrative activity and different scopes of application. For now, we will focus on three main forms of administrative action: (i) regulation or rulemaking; (ii) the adoption or issuance of administrative acts (discretionary and non-discretionary or mandatory); and (iii) factual activities in the exercise of administrative powers (like inspection, organization of work for public officials or disclosure of information to fulfill transparency requirements). Accordingly, the scope and role of algorithms will differ depending on the type of activity. Therefore, any analyses or reflections on AI-public authorities relationships cannot be made broadly. It is essential to draw a distinction between areas of action, since there are many fields that could be automated: there is a difference between automating formal activities (e.g., a public tender) and providing public services (e.g., diagnosing diseases). Assuming that using AI systems is a choice, it is for scholars, lawmakers and the Government, along with legal and technical stakeholders, to identify AI’s and algorithms’ role. Algorithms can be used to make decisions or simply to support human-made decisions. As for decision-making, they can be used to exercise close-ended powers or prerogatives with little scope for discretion.<sup>29</sup> However, let us recall that algorithms may also be used to create, apply, enforce and amend rules.<sup>30</sup> Law can be partially

<sup>24</sup> A.M. Turing, *Computing Machinery and Intelligence*, 433 ff.

<sup>25</sup> J.M. Lasalle, *Ciberleviatán*, 40-43.

<sup>26</sup> K.K. Yeung, *Algorithmic Regulation: a Critical Interrogation*, in *Regulation & Governance*, 2018, 12, 506.

<sup>27</sup> As pointed out by Huergo Lora, the application of predictive algorithms supersedes subjective decisions, that are replaced with predictions based on correlations that have been found by analyzing large datasets regarding past operations. However, at the same time, predictive algorithms also set aside rational criteria, because these predictions replace causality with correlation. See A. Huergo Lora, *Una aproximación a los algoritmos desde el Derecho Administrativo*, 35.

<sup>28</sup> V. Frosini, *Cibernética, Derecho, Internet y Sociedad*, Santiago de Chile, Ediciones Olejnik, 2019, 88.

<sup>29</sup> I. Martín Delgado, *Naturaleza, concepto y régimen jurídico de la actuación administrativa automatizada*, in *Revista de Administración Pública*, No. 189, 2009, 353 ff.

<sup>30</sup> L.B. Solum, *Artificially Intelligent Law*, in *Rivista de BioDiritto*, 1, 2019, 53 ff.; D. Canals, *El proceso normativo ante el avance tecnológico y de la transformación digital (inteligencia artificial, redes sociales y datos masivos)*, in *Revista General de Derecho Administrativo*, 50, 2019. In this regard, M. Moreno Rebato specifies that the ability of the existing computer codes to translate legal provisions into

computerized, and the application of AI focuses on accurately describing learning processes and other features of human intelligence so they can be reproduced by a machine.<sup>31</sup>

This calls for an in-depth analysis and discussion on the types of administrative powers and decisions that can be exercised and adopted using algorithms. We must also reflect on how to ensure that the legal language is being faithfully translated into computer code, i.e., accurately reflecting the lawmaker's intent and purpose. This is essential, because code writers interpret legal norms when they translate it from human language to computer language and therefore can make mistakes or there can be distortions.<sup>32</sup> Indeed, programmers and code writers do not only design software, but also build decision-making systems from a legal perspective.<sup>33</sup>

The materialization of all these challenges has a twofold link. On the one hand, they must abide by the principle of sound administration. On the other, they are subject to the principle of transparency.

### 3. Grounds: the principle of sound administration

After summarizing the concept of AI and its implications for administrative law, as well as the context for its application, it is worth providing an overview of the grounds, i.e., the "pretext," for using AI systems.

The term pretext should not be construed as having any negative connotations. Self-evidently, public-sector use of AI is not an obligation but an option. Nevertheless, it becomes an indispensable option if we take the principle of sound (alternatively expressed

as "good") administration seriously, i.e., a general principle governing public authorities' activity that has been acknowledged as a set of individual rights.

Sound administration must be the principle that guides the use of AI in administrative organization and procedure. This is yet to be fully internalized or assimilated by public authorities.<sup>34</sup>

A good public administration is made up of public authorities that perform the duties allocated to them, doing so in a transparent manner, serving citizens impartially, rationally and giving reasons for their decisions. ICTs—and AI in particular—can effectively secure the principle/right of/to sound/good administration.<sup>35</sup>

From a dogmatic perspective, administrative procedure under Spanish law is an autonomous, stand-alone constitutional institution or construct with a threefold purpose: (i) an instrument aimed at serving the general interest; (ii) a means for ensuring that public authorities act in accordance with the principle of legality; and (iii) a means for citizen participation in administrative decision-making.

This threefold purpose is enshrined in the Spanish Constitution, from which a set of principles and rights applicable to administrative procedures stem. The administrative procedure thus qualifies as an instrument to fulfill the relevant constitutional principles and standards related to administrative or public authorities' action.

First, Article 9(3) of the Spanish Constitution precludes arbitrariness, i.e., it states the principle of prohibition of arbitrariness. Art. 31 provides for the efficiency and rationality standards in public spending, and Art. 103 is worded as follows: "The public Administration serves the general interest with objectivity and acts in accordance with the principles of efficiency, hierarchy, decentralisation, deconcentration and coordination, being fully subject to justice and the law." On top of this, the Constitution

computer code for decision-making must not interfere with or otherwise restrict the exercise of lawmaking and rulemaking powers. However, he also claims that in a near future it is likely that legal rules be drafted in two formats: (i) human or natural language; and (ii) computer language, thereby enabling their full application and enforcement: M. Moreno Rebato, *Inteligencia Artificial (Umbrales éticos, Derecho y Administraciones Públicas)*, 129.

<sup>31</sup> S. De la Sierra, *La matematización de la realidad y del Derecho Público*, in *Ibericonect*, 14 March 2022, available at [www.ibericonnect.blog](http://www.ibericonnect.blog).

<sup>32</sup> D.K. Citron, *Open Code Governance*, in *University of Chicago Legal Forum*, No. 1, 2008, 366-367.

<sup>33</sup> D. Hogan-Doran, *Computer says "no": automation, algorithms and artificial intelligence in Government decision-making*, in *The Judicial Review*, No. 13, 2017, 8.

<sup>34</sup> J. Ponce, *Inteligencia artificial, Derecho administrativo y reserva de humanidad; algoritmos y procedimiento administrativo debido tecnológico*, in *Revista General de Derecho Administrativo*, No. 50, 2019, 6.

<sup>35</sup> D.U. Galetta, *Digitalizzazione e diritto ad una buona amministrazione (il procedimento amministrativo, fra Diritto UE e tecnologie ICT)*, in R. Cavallo Perin and D.U. Galetta (eds.), *Il Diritto dell'Amministrazione Pubblica digitale*, Torino, Giappichelli, 85.

Isaac Martín Delgado

instructs lawmakers to pass legislation regulating the impartiality standards applicable to public officials in the discharge of their duties.

The administrative procedure is thus the formal means enabling public authorities to (i) fulfill the public needs provided in the Constitution and the relevant statutory provisions (laws or parliamentary statutes); and (ii) secure the legality principle. Along these lines, according to the preamble of Act 39/2015 on the General Administrative Procedure (“LPAC”), “the citizens’ set of rights and entitlements is protected vis-à-vis public action by preventive mechanisms and instruments (...) relying on the administrative procedure, which ultimately expresses and ensures that public authorities remain fully subject to the law.” On top of that, as shown below, the objectivity standard for public action has a specific bearing on the administrative procedure.

The Constitution does not expressly provide for the general principle of sound administration. However, both the Spanish legal scholarship and the case law have inferred the requirement of good administration, along with public authorities’ legal obligation to conduct fair administrative procedures (due process) and the right to fair administrative procedures (due process right), the purpose being to achieve sound administrative decisions. Therefore, the administrative procedure is no longer construed as a process to adopt administrative acts (that was the 19<sup>th</sup> century and early 20<sup>th</sup> century approach). Rather, the procedure is now a means to guarantee good or sound administration.<sup>36</sup>

In its case law, the Spanish Supreme Court has consistently drawn an implied principle of sound administration from various constitutional provisions, in line with Art. 41 of the Charter of Fundamental Rights of the

European Union (“CFREU”). Note that Art. 41 CFREU requires that administrative action be conducted or handled with due care or due diligence.<sup>37</sup>

The LRJSP has enshrined into Art. 3 various general principles and standards governing public authorities’ action. It is worth noting the principles of participation, objectivity and transparency, along with the duty of good faith, the principle of legitimate expectations and the principle of institutional loyalty. Article 3 LRJSP only mentions these principles, without further specifying their content. Also, the Supreme Court has drawn from this provision the principle of good or sound administration.<sup>38</sup>

Finally, it is worth highlighting a general idea discussed above. Art. 75 LPAC is worded as follows: “[A]ny investigative acts required to determine, verify and establish the facts of the case shall be conducted ex officio and electronically by the body or authority conducting the procedure. This is without prejudice to the stakeholders’ [concerned parties’] right to request any acts or proceedings (i) requiring their participation; or (ii) qualifying as statutory or regulatory requirements.” This gives rise to the due process right to a fair procedure, thereby

<sup>37</sup> See an example of this in the Supreme Court Judgment of 15 October 2020: “The principle of sound administration is implied in Articles 9(3), 103 and 106 the Spanish Constitution. Also, it was codified in Articles 41 and 42 CFREU (...) and, according to the prevailing scholarly opinion, it shifted the 21<sup>st</sup> century legal paradigm bringing a new approach to public action precluding negligent management (...). As noted by this Court before, the principle of sound administration is not an empty shell. In fact, it is imposed on public authorities so that the set of rights and entitlements arising therefrom (the right to be heard, timely adjudication, reason-giving requirements, the requirement to conduct the proceedings and adjudicate the cases fairly or the duty of good faith), along with the relevant requirements incumbent upon public authorities, be effectively enforced.”

<sup>38</sup> Supreme Court Judgment of 19 February 2019 provides the following: “We have already discussed the principle of sound administration implied in Articles 9(3) and 103 of the Constitution, found in many rulings and codified in Article 3(1)(e) LRJSP. This principle requires public authorities to act as diligently as to prevent possible maladministration. It does not suffice for public authorities to strictly comply with the relevant procedural requirements. Rather, the principle of sound administration (i) requires that all statutory and constitutional rights and safeguards be secured and duly provided to taxpayers [i.e., citizens]; and (ii) instructs tax authorities to act with due care so as to ensure the effectiveness of these rights and safeguards whilst guaranteeing appropriate legal remedies preventing unlawful profits.”

<sup>36</sup> See J. Ponce Solé, *Deber de buena administración y derecho al procedimiento administrativo debido. Las bases constitucionales del procedimiento administrativo y del ejercicio de la discrecionalidad*, Valladolid, Lex Nova, 2001 and, more recently, Id., *La lucha por el buen gobierno y el derecho a una buena administración mediante el estándar jurídico de diligencia debida*, Alcalá de Henares, Universidad de Alcalá, No. 15, 2019. Taking a specific approach regarding the use of AI systems, see also J. Ponce Solé, *La prevención de riesgos de mala administración y corrupción, la inteligencia artificial y el derecho a una buena administración*, in *Revista Internacional de Transparencia e Integridad*, No. 6, 2018, 1-19.



requiring public authorities to act rationally and to make reasonable and sound decisions, as boldly stated by the Supreme Court in its Judgment of 14 April 2021.<sup>39</sup>

In a nutshell: administrative procedure—along with the statutory proceedings and safeguards attached thereto—is the means for enforcing the principles of sound administration, transparency and participation provided in the Constitution.

This overview of (i) the implications and requirements that flow from the principle of sound administration in connection with administrative procedure; (ii) the statutory provisions that enshrine such implications and requirements; and (iii) their respective scopes in Spanish case law, allows for a better understanding of an idea that has already been anticipated: the public-sector use of AI contributes to fulfill this ideal, but it has to be done in a certain way.

Public authorities must be understandable when taking AI-driven action,<sup>40</sup> which triggers the need for reviewing and tightening, if appropriate, any transparency and reasoning standards or requirements. However, on top of this, we must not overlook a clear connection with the principle of sound administration: carrying out or processing an administrative procedure to use an AI system<sup>41</sup> is necessary to secure transparency

(disclosure), participation (legitimacy) and legality (impact assessment).

These legal safeguards must be brought to the foreground and, when appropriate, incorporated into an all-encompassing approach also comprising political science outlooks.<sup>42</sup> For now, this approach can be summarized as having the following (essentially overlapping) aspects: systems (i) should be carefully designed by multidisciplinary teams; (ii) must be previously evaluated by a specialized certification agency; (iii) should be transparent and allow the public decision-makers to justify the decisions they adopt through them; and, in any event, (iv) public AI experts must be involved in the configuration, programming and operation of these systems.<sup>43</sup>

#### 4. Internal and external transparency of algorithmic administrative action as the materialization of the right to sound administration

##### 4.1. Premise

Based on the above considerations, it is worth concluding that, from a formal perspective, the main challenge posed by the public-sector use of AI systems is transparency related.<sup>44</sup>

The principle of good faith in government-citizen relationships, set out in Art. 3 LRJSP, is closely linked with the principle of sound administration. The transparency principle falls within this context, and can be construed as the possibility of being aware of automated decision-making processes<sup>45</sup> and of their underlying rationale.<sup>46</sup>

*perspectiva de la buena administración*, in *Revista catalana de dret públic*, vol. 58, 2019, 88, and J. Ponce, *Inteligencia artificial*, 35.

<sup>42</sup> E. Menéndez, *Buena administración, algoritmos y perspectiva de género*, in P.R. Bonorino, P. Valcárcel and R. Fernández (ed.), *Nuevas normalidades: Inteligencia Artificial, Derecho y género*, Cizur Menor, Aranzadi, 2021, 35-63.

<sup>43</sup> C. Ramió, *Inteligencia Artificial y Administración Pública*, Madrid, Los libros de la Catarata, 2018, 116-117.

<sup>44</sup> J. Cobbe, *Administrative Law and the Machines of Government*, 5.

<sup>45</sup> D.U. Galetta, *Digitalizzazione e diritto ad una buona amministrazione*, 99.

<sup>46</sup> For a comprehensive approach to the transparency principle related to the use of AI and massive data, including some case studies, see L. Cotino, *Hacia la Transparencia 4.0: el uso de la Inteligencia Artificial y big data para la lucha contra el fraude y la corrupción y las (muchas) exigencias constitucionales*, in C. Ramió

<sup>39</sup> See Supreme Court Judgment of 14 April 2021 (Appeal 28/2020): “The due process right to a fair administrative procedure, which is a corollary to the principle of sound administration, ensures that administrative decisions (...) be adopted duly giving reasons and in line with the procedural steps, without any procedural impropriety, since there must be no inconsistencies between the factual background, the legal grounds and the content of the relevant administrative decision. Under this constitutional sound administration requirement (...), public authorities must fulfill the reason-giving requirements and the principles of objectivity, transparency and rationality subject to Articles 35 and 129 LPAC. Within this context, regarding the public authorities’ duty to comply with all the procedural safeguards, we find an infringement of the due process right to a fair procedure. This due process right stems from the Constitution, namely from (i) Art. 24, ensuring the right to an effective legal remedy and, generally, the right to effective legal protection; and (ii) Art. 103, providing that all administrative action should be governed by the principle of objectivity.”

<sup>40</sup> J. Ponce Solé, *Inteligencia artificial, Derecho administrativo y reserva de humanidad: algoritmos y procedimiento administrativo debido tecnológico*, in *Revista General de Derecho Administrativo*, No. 50, 2019, 40.

<sup>41</sup> J. Valero, *Las garantías jurídicas de la inteligencia artificial en la actividad administrativa desde la*

Isaac Martín Delgado

There is a point to make before discussing the transparency of public authorities' actions in the context of the public-sector use of AI systems: human decision-making and action is far from transparent.<sup>47</sup> We have created a formal framework where transparency means disclosing diverse information that is considered relevant for justifying administrative action and for accountability purposes. This formal framework also allows for the possibility of requesting access—under public authorities' scrutiny—to information held by public bodies. The transparency principle definitely applies to algorithmic administrative action, and it poses its own challenges. But we can come up with a set of rights and obligations that allow for accepting the applicability of the principle of transparency to public action with *ad hoc* safeguards.

#### 4.2. A practical exercise: regulating the transparency of algorithmic administrative action

There are various ways of tackling transparency-related challenges from a legal perspective. A regulatory perspective could be a good approach and, more specifically, it is worth examining how this matter was dealt with by the Charter of Digital Rights passed by the Spanish Government (note that the Charter was prepared by the State Secretariat for Digitalization and AI with the support of an expert group).<sup>48</sup> This is an interesting approach because it is the first attempt at a general regulation on the subject. Also, it provides a great opportunity to gain a better understanding of the role of law in regulating technology. In sum, this approach allows to test the methodology discussed above.

There is no doubt that the lack of transparency (also referred to as “opacity”) is a major risk posed by AI systems. EU documents on this matter<sup>49</sup> lay down three

(ed.), *Repensando la Administración digital y la innovación pública*, Madrid, Instituto Nacional de Administración Pública, 2021, 169-196.

Regarding the Italian system, see A.G. Orofino, *The Implementation of the Transparency Principle in the Development of Electronic Administration*, in *European Review of Digital Administration & Law*, vol. 1, 2020, 123-142.

<sup>47</sup> C. Coglianese and A. Lai, *Algorithm vs. algorithm*, in *Duke Law Journal*, vol. 72, 2022, 1313.

<sup>48</sup> Available at [www.lamoncloa.gob.es](http://www.lamoncloa.gob.es).

<sup>49</sup> In particular, see *Ethics Guidelines for Trustworthy AI*, in <https://op.europa.eu/es>, published in April 2019 and prepared by the Independent High-Level Expert

Group on Artificial Intelligence set up by the European Commission in June 2018 (the “AI Guidelines”). As stated by the AI Guidelines, “[t]rustworthy AI has three components, which should be met throughout the system’s entire life cycle: (1) it should be lawful, complying with all applicable laws and regulations (2) it should be ethical, ensuring adherence to ethical principles and values and (3) it should be robust, both from a technical and social perspective since, even with good intentions, AI systems can cause unintentional harm. Each component in itself is necessary but not sufficient for the achievement of Trustworthy AI. Ideally, all three components work in harmony and overlap in their operation. If, in practice, tensions arise between these components, society should endeavor to align them.” The AI Guidelines specify the main contents of each of these three cornerstones. Accordingly, lawful AI means that AI must fulfill negative legal obligations (i.e., what cannot be done) and positive obligations (what should be done), which should be founded on fundamental rights (respect for human dignity; individual freedom; respect for democracy, justice and the rule of law; equality, non-discrimination and solidarity and, more broadly, citizens’ rights vis-à-vis public authorities); ethical AI involves being aligned with ethical norms arising from the principles of respect for human autonomy, prevention of harm, fairness and explainability; robust AI entails achieving that systems operate safely at a technical level. The AI Guidelines add a series of principles that must be translated into specific requirements to achieve Trustworthy AI: human agency and oversight (assessing the impact on fundamental rights and preserving the autonomy of addressees of AI systems as a guarantee of their operation and results); technical robustness and safety (including resilience to attack and security, fall back plan and general safety, accuracy, reliability and reproducibility); privacy and data governance (respect for privacy, quality and integrity of data); transparency (traceability, explainability and communication); diversity, non-discrimination and fairness (including the avoidance of bias, accessibility and universal design, and stakeholder participation); societal and environmental wellbeing (sustainability and an approach aimed at enhancing society); and accountability (system auditability, minimization and reporting of negative impacts, trade-offs and redress.).

*The European Declaration on Digital Rights and Principles for the Digital Decade* (COM (2022) 28 final, of 26 January) is a more recent document. It was accompanied by a Communication from the European Commission explaining the initiative, which was closer to legal propaganda than to an actual innovative provision in legal terms (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Establishing a European Declaration on Digital rights and principles for the Digital Decade, COM (2022) 27 final, of 26 January). The Declaration emphasizes (i) the need to place citizens at the center of the digital transition; and (ii) its applicability to public authorities. However, the Commission preferred to issue a political declaration of rights, and the Declaration itself confesses that not all the principles provided therein bring along directly applicable or enforceable rights. This is a surprising approach for two reasons. First, it conveys the idea that the digital world differs from the physical world.

requirements when it comes to applying transparency standards to AI techniques: (i) traceability (i.e., the capability to keep track of an AI system's data, development and deployment processes, typically by means of documented recorded identification); (ii) explainability or explicability (i.e., the ability to explain an AI system's technical processes and the human decisions attached thereto); and (iii) auditability (i.e., an AI system's capacity to enable the assessment of its algorithms, data and design processes). It is essential to keep track and document the data fed to the system and its operational process, letting stakeholders know how it works and disclosing the system's capabilities and limitations, as well as letting stakeholders participate in the system's design and application.

So, algorithmic systems' opacity can have three distinct forms:<sup>50</sup> (i) legal opacity, i.e., arising from the protection requirements

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However, they are both part of our real world, in which we move and interact with other people and public authorities. Second, it is shocking that the Declaration list political intentions instead of (i) regulating new rights to protect citizens against the potential risks of technology and (ii) providing for new obligations to secure these rights. On top of that, the Declaration is declaratory (repetition intended), although all legal texts (including non-binding instruments) are intended to have legal effects. We do welcome that the Declaration (i) seeks a human-centered and value-based digital transition; (ii) provides that technology should have a secondary role and be at the service of citizens and used for their benefit; and, above all, (iii) provides that everyone should have access to all key public services. Chapter III, "Freedom of choice," is particularly interesting. Its first section addresses the interactions with algorithms and AI systems, providing a principle and several political commitments: (i) the principle that everyone should be empowered to benefit from the advantages of artificial intelligence by making their own, informed choices in the digital environment, while being protected against risks and harm to one's health, safety and fundamental rights; (ii) the commitment to ensure that algorithmic systems are based on suitable datasets to avoid unlawful discrimination and enable human supervision of outcomes affecting people; (iii) the commitment to ensure that algorithms are not used to pre-determine people's choices, for example regarding health, education, employment, and their private life; and (iv) the commitment to provide for safeguards to ensure that artificial intelligence and digital systems are safe and used in full respect of people's fundamental rights.

<sup>50</sup> J. Cobbe, *Administrative Law and the Machines of Government*, 5. Along these lines, A. Cerrillo, *El impacto de la inteligencia artificial en las Administraciones Públicas: estado de la cuestión y una agenda*, in A. Cerrillo i Martínez and M. Peguera Poch (eds.), *Retos jurídicos de la inteligencia artificial*, Cizur Menor, Thomson Reuters Aranzadi, 2020, 83-84.

related to other rights and interests (e.g., intellectual property); (ii) sociological opacity, which arises from the little capacity for understanding how the systems work from a technological perspective; and (iii) intrinsic opacity, where a system's complex decision-making process itself is difficult for any human to understand. In my opinion, point (i) is necessary, point (ii) must be steadily remedied or corrected, by seeking to improve public officials' and citizens' technological skills, and the effects of point (iii) could be mitigated by researching and developing the technology itself. However, the form of opacity that law should combat, because it is absolutely unjustified, is the so-called intentional opacity, i.e., the concealment of the use and operation of these algorithmic systems.

We must begin by considering two premises:

– In practice, the AI applications and solutions currently used by public authorities more often than not have not been subject to a formal authorization or approval process. Also, usually they are not acknowledged or well-known except for specific references in press releases or technical documents. This creates opacity, legal uncertainty and mistrust, thus significantly impacting the legitimacy of public authorities' action.

– From a theoretical perspective, the public-sector use of AI systems is an expression of the public authorities' duty to serve the general interest effectively and objectively, as required by Art. 103 of the Constitution. AI can also be used to fulfill the principle of sound administration, which must be reconciled with the rights and safeguards granted to citizens by the Constitution and the rest of the Spanish legal framework. And, in particular, AI must fulfill and secure the individual rights stemming from the principle of sound administration. Therefore, AI is an instrument, not a replacement, of the notion of public administration within the terms of the *Constitución Española*.

On top of that, keep in mind that the use of AI techniques is neither a given nor an imposition. It is us who must determine which instruments are best suited to meet our needs, along with their scope, applicability and safeguards, and we must do so by relying on the law, public policies and technical aspects. An essential safeguard is transparency, tied to the duty to give reasons and to the need for

Isaac Martín Delgado

appropriate review or scrutiny.

As discussed before, transparency is both a general principle guiding administrative action (set out in Art. 3 LRJSP) and a constitutional right (provided in Art. 105 of the Constitution and further implemented through the Act 19/2013, of 9 December, on Transparency and Good Governance or “LTBG”). Both as a principle and as an enforceable right, transparency has many dimensions and practical applications in various areas of the administrative law framework, but they are all dimensions of the same principle and of the same right. Explainability, i.e., the ability to explain technical processes and the decisions arising therefrom, is essential to build trust in the algorithmic system,<sup>51</sup> but even more so to allow for the legal acknowledgement of algorithmic systems if they are used for decision-making. In fact, the human ability to interpret the system’s technological process is tied to the duty to give reasons, insofar as it allows for explaining the factual context or the factual grounds of the decision.<sup>52</sup>

Consequently, discussing transparency in connection with the public-sector use of AI requires considering a twofold dimension of transparency: (i) external transparency, related to the disclosure of information about, e.g., AI-driven systems in the public sector, the bodies responsible for setting them up and managing them, the companies that have designed them or the award procedure; and (ii) internal transparency, related to the operation of the relevant AI solution, e.g., its scope of application or applicability, whether or not it is used for decision-making, the type of technology or the system’s logical reasoning. External transparency has to do with transparency *stricto sensu*, i.e., with the obligation to disclose certain information on the grounds that it is relevant for citizens to understand how public authorities act.<sup>53</sup> Internal transparency has to do with the

reasons or justification for the decisions adopted by or based on algorithmic systems, in order to show why the system does what it does.<sup>54</sup>

Based on these premises, bear in mind that transparency *stricto sensu* has a proactive and a reactive dimension. At this point, it is worth examining two provisions of the Charter of Digital Rights: XVIII and XXIII. Article XVIII refers to citizens’ digital rights in their relationships with public authorities, and it includes two general requirements, which are not really novel, since they can be found in older statutory provisions. Firstly, it provides that the transparency principle applies to the digital environment. More specifically, Article XVIII secures the right of access to public information and seeks to guarantee compliance with active disclosure requirements. Secondly, Article XVIII requires that the public bodies responsible for any public action taken in the digital environment be identified. However, sections 6 and 7 do constitute a major development. These sections provide a general consideration and three specific safeguards directly related to transparency and the proper operation of any algorithms involved in administrative action or decision-making.

The general consideration is that citizens’ AI-related rights under the Charter will be equally applicable within the context of administrative action. Article XXIII requires a human-centered approach and specifies that, in the development and life cycle of AI systems, the following rights must be secured: algorithmic non-discrimination; transparency, auditability, explainability and traceability; and accessibility, usability and reliability. On top of this, Article XXIII provides the right to request human supervision and intervention, and to challenge AI-based automated decisions having a personal or financial impact.

The specific safeguards—related to internal

<sup>51</sup> M. Moreno Rebato, *Inteligencia Artificial (Umbrales éticos, Derecho y Administraciones Públicas)*, 77.

<sup>52</sup> F. Palmiotto Ettore, *The Right to Contest Automated Decisions*, in *The Digital Constitutionalist*, available at <https://digi-con.org>.

<sup>53</sup> Royal Decree 203/2021, of 30 March, approving the E-government Regulation, provided for a significant twofold development in Art. 13 (although only applicable to national authorities, i.e., not to regional or local ones). On the one hand, the competent administrative body must issue a resolution authorizing a specific form of administrative action to become automated. On the other, such resolution must be posted on the body’s website.

<sup>54</sup> G. Coglianese and D. Lehr differentiate between “fishbowl transparency” and “reasoned transparency.” They consider that the first allows to understand *what* public authorities did and the latter explains *why* they took action. They are both connected: reasoned transparency depends on fishbowl transparency. After all, for the public authorities to offer a public explanation of why they took a specific action, they must, if nothing else, disclose what action they took. G. Coglianese and D. Lehr, *Transparency and algorithmic governance*, Faculty Scholarship at Penn Law, 2123, 2019, 9-15.

transparency—include (i) the right to receive an understandable reasoning expressed in natural language for the decisions adopted in the digital environment, backed by the relevant legal provisions, the technology used and the application criteria; (ii) a digital rights impact assessment of algorithm designs for automated or semi-automated decision-making; and (iii) that discretionary decision-making be reserved to persons. Finally, the Charter has incorporated the right to transparency regarding the use of AI instruments, including their operational structure and scope in each procedure, focusing on the data used, the margin of error, the scope of application and whether they are used for decision-making. Additionally, the Charter refers to the applicable legislation for the conditions to access the source code in order to verify that there are not any discriminatory outcomes.<sup>55</sup>

We welcome these provisions, due to their implications, but it is worth making two remarks. First, these are formal safeguards, which should be accompanied by an institutional guarantee, i.e., empowering a specific body to perform the prior verification and approval of algorithmic systems—whether one for each government level or a single body competent at all levels subject to a public-public arrangement. Second, they clearly show the Charter’s weaknesses, since they are non-binding provisions. Public authorities may very well ignore any new developments if they are only provided in the Charter. In other words, these Charter provisions are mere guidelines. We are aware that the Charter was drafted as if it was eventually going to be a binding instrument, with the aim of inspiring and guiding upcoming rules. Precisely because of that, its entry into force will have a positive legal impact, since it will be applied by various legal actors—perhaps even judges will rely on it as interpretative guidance, or it may be incorporated into binding legal provisions. However, all of these positive impacts will depend on the legal stakeholders involved (judges, courts, governments and lawmakers), and not on the Charter’s ultimate purpose. The law is not omnipotent. It needs policymaking to accomplish the ends pursued by legal

provisions, but being a binding instrument is always key to achieve these goals. Unquestionably, the context does call for binding rules on the public-sector use of AI and algorithmic systems.

It is essential to set out a requirement for the legal feasibility of algorithmic systems: keeping track and documenting the initial programming method, the input data collected and selected, how the process worked, the trials, and any validations.<sup>56</sup> In particular, active disclosure duties should include any malfunctioning. This is all indispensable, not only from the perspective of transparency *stricto sensu*, but also, and more importantly, from the perspective of the duty to give reasons and oversight. In fact, being aware of these aspects (disclosure) is a pre-requirement for appropriately reviewing the legality thereof.

#### **4.3. Active disclosure and the right of access regarding public-sector use of AI**

As pointed out above, the Charter of Digital Rights provisions are not legally binding. However, a requirement for both external and internal transparency remains applicable to public authorities that exercise their powers by relying on algorithmic systems. In fact, both the LTBG and the LPAC include clear provisions that apply in this domain.

First, based on Art. 5(1) LTBG, one could argue that there is an active disclosure requirement covering algorithmic systems’ operational structure, purpose, input data and actual functioning. Art. 5(1) LTBG requires public authorities to publish, on a regular basis, updated “*information that may be relevant to ensure the transparency of public authorities’ activities related to the functioning and oversight of public action.*” The use of algorithmic systems for administrative decision-making is most certainly relevant for these purposes. Therefore, all the information regarding its existence, applicability and scope must be made available on all the websites of public bodies relying on algorithms for decision-making.

Additionally, Art. 35 LPAC unambiguously establishes the duty to give reasons in any administrative acts that may

<sup>55</sup> These developments, or part thereof, were included in the proposal submitted by *Red DAIA* during the public consultation. See <http://reddaia.org/> and the list of submitted proposals <https://portal.mineco.gob.es/es>.

<sup>56</sup> M. Moreno Rebato, *Inteligencia Artificial (Umbrales éticos, Derecho y Administraciones Públicas)*, 78.

Isaac Martín Delgado

interfere with citizens' rights or interests.<sup>57</sup> Indeed, from a formal perspective, the use of algorithms neither excludes the duty to give reasons nor entails substantial changes as for the contents of the reasoning required in algorithm-driven administrative acts.<sup>58</sup> However, although there are requirements in place (which can be deemed applicable to the public-sector use of AI systems), it is advisable to strengthen the safeguards attached thereto. First, we must extend the transparency obligations related to model elaboration and system design,<sup>59</sup> adding to the list of active disclosure requirements under the general national legislation any information on the algorithmic system's technical specifications, input data, training results and eventual audits that have been performed, in order to prevent interpretations that are incompatible with the transparency principle. Second, reason-giving (although short) must be reasonable and tailored to the technology's distinct features.<sup>60</sup> On top of that, if any algorithmic prediction has a direct or indirect bearing on an administrative decision, it should be included in the reasoning, and the algorithm must be incorporated into the administrative file.<sup>61</sup>

Finally, we must assess if providing access to source codes is essential from the perspective of the duty to give reasons.<sup>62</sup> Self-

evidently, accessing and evaluating the source code is the only way to know how the system operates from a technological perspective and, if appropriate, to detect any errors.<sup>63</sup> Also, the source code allows for verifying if the algorithmic system's programming is in line with the provision it applies or enforces.<sup>64</sup> In fact, some have claimed that there is a direct link between open source software—i.e., designing open source algorithms – and the principles of democracy and hierarchy in administrative organizations, since otherwise senior public officials (who are held accountable for the decisions) would depend on the code writers or programmers.<sup>65</sup> However, there are downsides to providing access to source codes, related to the possibility of “cheating” the system.

In Spain, this issue is already on the table from the perspective of the right of access to public information subject to transparency regulations. There is no point in examining all cases in depth, since that has already been done by legal scholars. Rather, we provide an overview of the approach to the matter.

The Transparency and Good Governance Council ruled on various appeals against decisions that denied requests to access the source code of certain computer applications. First, it is worth mentioning Resolution 701/2018, of 18 February 2019, stating that source codes qualify as public information, thus subject to the right of access, although in this specific case access was denied on

However, regarding predictive algorithms—due to their innovative potential stemming from their ability to add self-elaborated content—he considers that public authorities should disclose the use thereof in decision-making. Huergo Lora argues that algorithms qualify as grounds of the administrative decision and thus must be incorporated into the file. See A. Huergo Lora, *Una aproximación a los algoritmos*, 72 and 85. Along these lines, G.M. Díaz González claims that disclosing source codes is not always the right answer, because (i) citizens lack sufficient knowledge to understand how the system works; and (ii) some systems are too complex for human understanding, aside from the fact that disclosure can negatively affect the very algorithm-driven administrative duty. See G.M. Díaz González, *Algoritmos y actuación policial: la policía predictiva*, in A. Huergo Lora (ed.), *La regulación de los algoritmos*, Cizur Menor, Thomson-Aranzadi, 2020, 189.

<sup>57</sup> D.K. Citron, *Open Code Governance*, 357.

<sup>58</sup> G. Carullo, *Decisione amministrativa e intelligenza artificiale*, 441. According to this author, source codes should be (i) included in the reasoning, in the text, at least the part thereof that allows for verifying that the legal provisions and their translation into computer code match; and (ii) published or posted on the relevant public body's website.

<sup>59</sup> D.K. Citron, *Open Code Governance*, 358 ff.

<sup>57</sup> On this matter, see E. Gamero Casado, *Compliance (o cumplimiento normativo) de desarrollos de Inteligencia Artificial para la toma de decisiones administrativas*, in *Diario La Ley*, No. 50, 2021, in totum.

<sup>58</sup> G. Carullo, *Decisione amministrativa e intelligenza artificiale*, in *Diritto dell'informazione e dell'informatica*, 2021, 440.

<sup>59</sup> J. Valero, *Las garantías jurídicas de la inteligencia artificial*, 88; along these lines, regarding the Italian system, see G. Pinotti, *Amministrazione digitale algoritmica e garanzie procedimentali*, in *Labour & Law Issues*, vol. 7, No. 1, 2021, 92.

<sup>60</sup> J. Valero, *Las garantías jurídicas de la inteligencia artificial*, 88.

<sup>61</sup> A. Huergo Lora, *Administraciones Públicas e inteligencia artificial*, 89.

<sup>62</sup> J. De la Cueva, *La importancia del código fuente*, in F.S. Capilla Roncero (ed.), *Derecho digital: Retos y cuestiones actuales*, Cizur Menor, Thomson Reuters Aranzadi, 2019, 109-127; M.L. Gómez Jiménez, *Automatización procedimental y sesgo electrónico: el procedimiento administrativo electrónico desde la inteligencia artificial*, Cizur Menor, Aranzadi, 150, are in favor of allowing access to source codes. On the contrary, regarding non-predictive algorithms, Huergo Lora argues that, considering the currently applicable regulation, there is no need for (i) disclosing to citizens that a decision has been adopted through a computer application; or (ii) making the source code available (unless expressly required by a legal provision).

intellectual property grounds, despite that the application (BOSCO, used by electricity marketers to determine if a given consumer qualifies as vulnerable and therefore is eligible for a discount) had been designed by the public administration.<sup>66</sup> More importantly, see Resolution 58/2021, of 20 May 2021, on a request to access the algorithm used to calculate social security pensions. The resolution reiterates that this algorithm qualifies as public information, and relevant information for that matter, since it explains how an administrative decision is made. Resolution 58/2021 adds a remarkable statement: “As long as there are no other mechanisms allowing to accomplish these transparency-related goals with equivalent guarantees—e.g., independent auditing or monitoring bodies—the only effective remedy is providing access to the algorithm, to its code, so it can be reviewed both by parties seeking redress for the algorithmic outcome and by citizens in general, for the sake of ethics and fairness.” This statement has been replied in many other resolutions.

The first judgment in this matter delivered in Spain in the abovementioned BOSCO (electricity bill-related) case departed from this line of reasoning. Judgment of 30 December 2021 (proceedings 18/2019) issued by Central Judicial Administrative Court n. 8 takes a different approach. It upholds the aforesaid intellectual property grounds but, more importantly, it relies on the premise that “refusing access to the computer application’s source code does not breach the legality principle, since, ultimately, it can be verified if the applicant is eligible for the discount tariff.” Additionally, the Court holds that the app is a mere tool at the administrative body’s service: “[T]he administrative act is not issued by a computer application, but by a public authority. The addressee may challenge the act through the relevant administrative appeals and judicial remedies. Thus, the legality of the administrative act is not backed up by the (ancillary) app used at a stage of the

administrative procedure. Rather, the legality of the act is supported by the legal provisions on the subject-matter” (legal basis 3).

It is worth noting the intrinsic ties between external and internal transparency. Indeed, reason-giving can be affected by the limits on active disclosure as applied to the existence and use of algorithmic systems. A broad requirement to disclose information on the system’s design, purpose, underlying functioning, input data, tested margin of error and accuracy or audit results enhances the reasoning of the algorithm-driven decision made by public authorities. However, despite the efforts made to deliver a duly reasoned decision in a specific case, the reasoning will hardly be acceptable in the absence of the above algorithm-related information when dealing with autonomous systems. Reasons are not enough; it is essential to know that the system is functioning correctly<sup>67</sup>.

Keep in mind that reason-giving does not only have consequences for the specific case in which it is provided. Although it refers to individual procedures and to the particular decision made therein, decisions adopted *en bloc* on the basis of a programmed system could have an impact that goes beyond the specific case at hand.<sup>68</sup> Therefore, together with the safeguards provided for the parties concerned, we must secure guarantees seeking to protect all citizens.<sup>69</sup> Simply put, algorithmic systems’ potential impact requires having the ability to verify their functioning, in accordance with the principles of transparency and participation.<sup>70</sup>

These considerations also apply from the perspective of administrative scrutiny and judicial-administrative review. Despite being unable to “enter” the decision-maker’s mind, when dealing with algorithms we must learn

<sup>66</sup> The Catalonia Regional Commission for Guaranteeing the Right of Access had already ruled along these lines in joined Resolutions 123 and 124, of 21 September 2016, regarding access to an algorithm that determined the composition of the teacher boards for correcting university entrance exams. These resolutions require to disclose the algorithm to the applicant in mathematical language (if available) or, at least, in natural language, in order to allow the parties to learn how the system is run.

<sup>67</sup> See the complete analysis about the many questions relating to transparency in L. Cotino Hueso, *Transparencia y explicabilidad de la inteligencia artificial y “compañía” (comunicación, interpretabilidad, inteligibilidad, auditabilidad, testabilidad, comprobabilidad, simulabilidad...)*. Para qué, para quién y cuánta, in L. Cotino Hueso and J. Castellanos Claramunt (eds.), *Transparencia y explicabilidad de la inteligencia artificial*, Valencia, Tirant lo Blanch, 2022, 25-70.

<sup>68</sup> G. Coglianese and D. Lehr thus claim that in most cases it will suffice to show that the system has been designed and is run to advance a legally valid purpose and that it is functioning correctly to advance that purpose in the case at hand. See *Transparency and algorithmic governance*, 40 and 47.

<sup>69</sup> G. Pinotti, *Amministrazione digitale algoritmica*, 85.

<sup>70</sup> D.K. Citron, *Open Code Governance*, 357.

Isaac Martín Delgado

how that “programmed mind” reasons, particularly if it operates with certain degree of autonomy.

In a nutshell: transparency and reason-giving are premises, requirements for monitoring compliance with the legality principle.<sup>71</sup> Applying the obligations arising from these premises at the algorithm design stage is a necessary modification.

However, transparency and reason-giving have further-reaching implications. These are not merely formal aspects. In fact, they have substantive dimensions<sup>72</sup> that could affect the merits or the very substance of administrative action. Consequently, failure to fulfill transparency and reason-giving obligations could render the decision invalid or voidable.

Finally, transparency and reasoning are also linked with a twofold technological element: explainability and interpretability.

On the one hand, explainability is associated with the internal logic and mechanics that are inside a machine learning system.<sup>73</sup> On the other, interpretability is mostly connected with the human intuition or understanding behind the outputs of a model, and it is an indispensable requirement if negative or unexpected outcomes could harm the parties concerned—therefore, it is not as important in cases in which the system is sufficiently tested and validated that we trust its decision, even if the system is not perfect.<sup>74</sup> So, an interpretable model is not always a model whose internal logic is understandable by humans.

This matter has a direct impact on the formal requirements applicable to algorithmic systems from the perspective of transparency and review. Interpretability does not always

mean explainability and vice versa.<sup>75</sup>

Drawing this distinction is important because it aptly illustrates a claim that most scholars reject: transparency and reason-giving do not necessarily entail full openness of algorithmic systems in every single case. Transparency and the duty to give reasons relate to the system’s legitimacy, and fulfilling this aim does not always require disclosing the system as a whole, i.e., the source code.<sup>76</sup> What really matters in legal terms is to disclose that the system exists, the input data, information about its technical operability and the reasons on which the decision is founded. Formal transparency and legal reasoning matter; the internal technical processes to arrive at a decision, not as much. In sum, there is a need for an explanation in ordinary language on the system’s functioning logic, but not on its mathematical or computer logic. Legally speaking, the inner workings of an algorithm is not what is in need of explanation, but rather, the human interaction with the output of the algorithm and the criteria used in designing the inputs to safeguard the decision’s understandability.<sup>77</sup>

For the sake of legal certainty, the principle of democracy and the right of defence, all of the above should come together in a statutory provision.

### 5. Concluding remarks: some necessary safeguards

Public-sector use of AI is not a given or an imposition. There is great latitude for deciding which issues should be solved, what is the most suitable solution and how we must implement it in each case. Disregarding AI altogether, thereby waiving the principle of effectiveness by failing to incorporate the best available technology and thus wasting its potential is not an option, but neither is blindly or uncritically applying AI systems as if there were no other options or approaches.

The key to identifying AI’s role and scope in administrative law must always be the same: relying on technological innovations to

<sup>71</sup> In this regard, A. Soriano Aranz considers that the lack of transparency of algorithmic systems makes it hard to review the legality of the software used for automated decision-making and hinders the parties’ ability to challenge the outcomes. See A. Soriano Aranz, *Decisiones automatizadas: problemas y soluciones jurídicas. Más allá de la protección de datos*, in *Revista de Derecho Público: teoría y método*, No. 13, 2021, 94.

<sup>72</sup> E. Carloni, *I principi della legalità algoritmica. Le decisioni automatizzate di fronte al giudice amministrativo*, in *Diritto Amministrativo*, No. 2, 2020, 293.

<sup>73</sup> P. Linardatos, V. Papastefanopoulos and S. Kotsiantis, *Explainable AI: a review of machine learning interpretability methods*, in *Entropy*, No. 23, 2021, 2-3.

<sup>74</sup> F. Doshi-Velaz and B. Kim, *Towards a rigorous science of interpretable machine learning*, available at <https://arxiv.org/abs/1702.08608>.

<sup>75</sup> P. Linardatos, V. Papastefanopoulos and S. Kotsiantis, *Explainable AI*, 3.

<sup>76</sup> H. Palmer Olsen, J. Livingston Slosser and T. Troels Hildebrandt, *What’s in the Box? The Legal Requirement of Explainability in Computationally Aided Decision-Making in Public Administration*, in *iCourts Working Paper Series*, No. 162, 2019, 224.

<sup>77</sup> H. Palmer Olsen, J. Livingston Slosser and T. Troels Hildebrandt, *What’s in the Box?*, 227.



solve legal issues. In other words, we need to make sure that AI is not merely compatible with the rule of law, but actually integrates its core principles.<sup>78</sup>

Admittedly, we still need a deeper knowledge about the power of AI, but it is safe to say that there is room for AI systems in administrative law, and specifically for self-learning algorithms. In a context of exponential increase in data, we need algorithms to manage all this information in order to improve decision-making processes.

The initial approach should be to take advantage of all available tools to optimize decision-making criteria. Accordingly, we can assert that the principle of sound administration—along with the duty to act and decide or adjudicate with due diligence when weighing all the facts, interests and rights at stake—requires to embrace the use of AI. Note that AI, and in particular algorithms, can effectively contribute to improving administrative action. For the moment, however, it is just a tool that transforms information into predictions that help us make decisions. I do not believe that the full understanding of algorithmic reasoning by human operators is the core issue. Algorithmic opacity can turn into algorithmic transparency through appropriate design requirements.<sup>79</sup> However, we do need to identify a set of essential safeguards and legality criteria that allow to maintain a minimum degree of machine autonomy while preventing deviations and biases,<sup>80</sup> detecting vulnerabilities and correcting errors. Drawing clear boundaries is also a must. These boundaries must include excluding the application of AI from strictly and inherently human tasks. Ultimately, the key lies in the idea of human-machine cooperation and in how they complement each other: we need to use AI<sup>81</sup> in places that are off-limits for the

human mind, always subject to human oversight and respecting the rights and safeguards of the parties affected by administrative action. Especially—and this should be the starting point—we must rely on AI for any tasks to which human capacity does not provide any added value, i.e., simple or routine tasks.

Therefore, it is essential to keep the actual risks in mind. Although this may not be the place to discuss biases in depth, note that an algorithmic bias occurs when a given system, due to faulty training data, methodology or model design, delivers different results based on the group to which the individuals belong, thus prejudicing them for belonging to that group.<sup>82</sup> However, keep in mind that what is generally considered a bias could be a natural consequence arising from the system's input data, where the system simply delivers a statistical reasoning with probabilistic outcomes. If data objectively lead to an outcome, there is no malfunctioning or bias, but simply an output from the data.<sup>83</sup> It would be necessary to carefully weigh and assess the actions and decisions to be taken on a case-by-case basis to prevent pattern categorization and identification from harming individuals who, despite being a match, do not meet the conditions for being subject to the applicable legal rule.

This calls for a deeper reflection to answer two questions: given the large amount of available data, is it feasible or realistic to implement major transformative AI-driven projects? Would it be better to focus on enhancing data quality or establishing parameters aimed at ensuring the quality of data in the future? In sum, although there will always be bias-related risks, in order to face this challenge we must plan and regulate data governance.<sup>84</sup>

communications and papers written from the beginning of time until 2003 to store them, we would need 5 billion gigabytes. Currently, it takes two days to generate this amount of data or information: D. Cardon, *Con qué sueñan los algoritmos*, 18.

<sup>78</sup> M. Moreno Rebato, *Inteligencia Artificial (Umbrales éticos, Derecho y Administraciones Públicas)*, 53.

<sup>79</sup> C. Coglianese and D. Lehr, *Regulating by Robot: Administrative Decision Making in the Machine-Learning Era*, in *Georgetown Law Journal*, 2017, 7.

<sup>80</sup> C. Campos Acuña, *Inteligencia Artificial e innovación en la Administración Pública: (in)necesarias regulaciones para la garantía del servicio público*, in *Revista Vasca de Gestión de Personas y Organizaciones Públicas*, No. 3, 2019, 87, available at [www.ivap.euskadi.eus](http://www.ivap.euskadi.eus).

<sup>81</sup> This statement can be backed up by the following fact provided by D. Cardon: if we scanned all

<sup>82</sup> See a thorough analysis on preventing algorithmic discrimination in A. Soriano Aranz, *Data protection for the prevention of algorithmic discrimination*, Cizur

Isaac Martín Delgado

There is a general need for safeguards and principles. The ones in place right now meet our needs for the most part, but sometimes, regarding specific aspects, they may need an appropriate *ad hoc* response tailored to the reality of AI. E-government does not only consist in incorporating technological tools into the grids of administrative law, but it also entails a revision of the parameters for framing reality. Nevertheless, the general doctrinal categories remain useful. The principle of transparency, the principle of disclosure, the principle of sound administration, the principle of legality, the principle of accountability are general categories that, maybe with new nuances, are still valid and relevant in the field of administrative law. Likewise, the categories of defects of administrative decisions can be applied to the grounds for invalidity: material errors, unreasonableness of the solution chosen by the system, abuse of power in programming, inadequate statement of reasons, or lack of competence.

There is, however, a big difference: public authorities can decide through non-human intelligence; i.e., self-learning algorithms that can handle information and make decisions based on knowledge that humans cannot obtain by themselves. As legal scholars and technology experts, we should focus our efforts on this aspect.

So, while preserving the general categories, their specific application to automated administrative activity will have to be adapted in certain instances. The following proposals seek to strike a balance between technology and law—ultimately, to “humanize the machine.”<sup>85</sup>

All of these proposals are premised on the following key aspects, which also aptly summarize the above insights. These key elements must provide the foundations for rethinking and, if appropriate, rebuilding, new principles or new safeguards: (i) human primacy and human control over algorithmic systems; (ii) transparency and explainability; (iii) prior approval of the systems based on risk assessment; (iv) system functioning auditability; and, always (v) available legal remedies to challenge any actions or decisions.

Human control or oversight over

Menor, Thomson Reuters-Aranzadi, 2021.

<sup>85</sup> V. Frosini, *Cibernética, Derecho, Internet y Sociedad*, 70.

algorithms suggests that algorithms be subject to constant monitoring. The need for the prior approval of algorithmic systems is justified because we need to (i) detect any issues to be tackled within the organization through AI-driven tools and techniques; (ii) pick the most suitable instrument; and (iii) implement the AI solutions with appropriate legal and technological safeguards. Since algorithms pre-determine final acts or decisions, they must be directly challengeable.

Moreover, see below three specific proposals, which would require regulation, that aptly summarize this paper.

*First.-* Shaping a new principle: the “principle of minimal automated activity.” There is no doubt about the applicability and effectiveness of the general principles of law in our system. They reflect or represent social values and thus guide other sources of law or legal instruments, helping to interpret them all and applying by default.<sup>86</sup> The use of big data, and in particular personal data processing, entails significant risks; for instance, the lack of knowledge of the data used by the algorithms or the inability to fully understand the rationale underlying the final prediction-decision. This reinforces the idea that automated administrative action based on machine learning should be (at least for the moment) limited to factual or formal actions with no political discretion involved. Also, the head of the administrative body using the machine should in any case remain materially and formally accountable. In areas where there is certain political discretion, the machine’s role will be to support decision-making, but not to replace it.<sup>87</sup> Considering

<sup>86</sup> L. Ortega Álvarez, *Funcionalidad y eficacia de los principios generales del Derecho*, in *Justicia Administrativa*, No. 15, 2002, 5-22.

<sup>87</sup> D. Marongiu considers that human control of the results produced by the machine in the exercise of authority must be absolute and permanent, and he concludes that AI should only be used in the field of administrative activity regarding public services: D. Marongiu, *Inteligencia artificial y administración pública*, in C. García Novoa and D. Santiago Iglesias (eds.), *4ª Revolución Industrial: impacto de la automatización y la inteligencia artificial en la sociedad y la economía digital*, Cizur Menor, Thomson-Aranzadi, 2018, 396-397. According to M. D’Angelosante, the indeterminate nature of the criteria to be ascertained and evaluated prior to the decision, and the decision’s discretionary nature, represent obstacles for automation: M. D’Angelosante, *La consistenza del modello dell’amministrazione “invisibile” nell’età della tecnificazione: dalla formazione delle decisioni alla responsabilità per le*

technology's current development, there is no room for automated, algorithmic-driven discretionary powers, precisely because of this "political" scope of action. The expression of political-administrative will, which entails direction, coordination or similar action, must be human.<sup>88</sup> However, this does not preclude the competent authority from relying on AI systems to make the decision.

At present, human intervention cannot be suppressed altogether,<sup>89</sup> since machine learning is predictive in nature and does not allow for causal interpretation.<sup>90</sup> Ultimately, algorithmic systems must be used if there is room for improving public authorities' action,<sup>91</sup> not only from the perspective of effectiveness and efficiency, but also with the

aim of fulfilling citizens' rights.

It is of paramount importance to ensure data quality. If this premise is not fulfilled, the principle of data quality will remain applicable and there would be no room for using algorithmic systems for administrative decision-making.<sup>92</sup>

So, using an algorithm will only be allowed if (i) the aim pursued can be accurately and clearly determined; (ii) there is sufficient quality data to take action; (iii) and the algorithmic system has been successfully tested, considering its potential risks for citizens' rights and interests, and citizens have had the opportunity to get involved in the algorithm's design and set up.<sup>93</sup> On top of that, keep in mind that using algorithms will only be possible for highly structured and parametrical areas of decision-making, where abstract concepts do not prevail, since they are hard to codify.

*Second.-* Specifically regulating the process of adoption of computer programs and the transparency of their operation. Such regulation must fulfill and reinforce the general principle of transparency and the principle of impartiality regarding the system configuration and the implementation thereof. Although these principles are currently applicable, there must be specific rules to enforce them regarding the use of algorithms. For instance, participation requirements must apply both to system design<sup>94</sup> and to the system's implementation, allowing the parties concerned to have an impact on the final algorithmic-driven decision. The dehumanization inherent to automated decision-making should not deprive citizens of a human reference to raise concerns or objections, aside from any legal remedies at their disposal to challenge the decisions. Also, it is vital to ensure (i) the objectivity of the data used; and (ii) the impartiality of the transformation of data into predictions or forecasts. A new regulation on algorithm

*decisioni*, in S. Civitarese Matteucci (ed.), *A 150 anni dall'unificazione amministrativa italiana – La tecnificazione*, Firenze, Firenze University Press, 2016, 166.

<sup>88</sup> B. Raganelli, *Le decisioni pubbliche al vaglio degli algoritmi*, in *Scritti in onore di Eugenio Picozza*. Naples, Editoriale scientifica, 2020, 15. She puts forward three forms of interaction or dialogue between AI and discretionary decision-making: (i) preclusive dialogue, where there would be no room for algorithms because there is extensive discretion; (ii) cooperation-based dialogue, under which AI is a useful tool to support discretionary decisions; and (iii) self-regulated dialogue, in which AI is used to limit the exercise of discretionary powers by pre-defining future action and becoming bound to its own rules. (18 ff.)

<sup>89</sup> J. Ponce Solé argues that the use of AI in fields of discretionary decision-making should be precluded. He advocates to regulate a "reserve of humanity" or an "only-human-decision-making clause" to ensure that certain decisions can only be taken by humans: J. Ponce Solé, *Inteligencia artificial, Derecho administrativo y reserva de humanidad*, 26-33. A. Cerrillo claims that we must acknowledge the need to ensure human supervision in the use of algorithms to prevent negative effects. Human oversight could entail incorporating into discretionary decision-making a mechanism for human intervention, where humans could review or validate the decision taken by the machine. See A. Cerrillo, *El impacto de la inteligencia artificial en las Administraciones Públicas*, 82. Along these lines, M. Moreno Rebato holds that using high-risk AI systems requires human oversight; M. Moreno Rebato, *Inteligencia Artificial (Umbral ético, Derecho y Administraciones Públicas)*, 53. M. D'Angelosante, imagines a scenario where machines operate autonomously, and public officials only intervene in the decision-making process in the event of disputes over the choice made by the machine: M. D'Angelosante, *La consistenza del modello dell'amministrazione "invisibile"*, 157. She also considers that replacing public officials would impinge on citizens' right to a personalized interlocutor (p. 161).

<sup>90</sup> C. Coglianese and D. Lehr, *Regulating by Robot: Administrative Decision Making in the Machine-Learning Era*, 23-24.

<sup>91</sup> C. Coglianese and D. Lehr, *Transparency and algorithmic governance*, 55-56.

<sup>92</sup> E. Carloni insists on the idea that the legality or lawfulness of administrative action is not only secured by the algorithm's understandability, the ability to challenge it and monitor it, and a public official's validation. Also, it will be necessary to make sure that the system does not incur in discrimination. To that end, proving data quality is a requirement. See E. Carloni, *I principi della legalità algoritmica*, 289.

<sup>93</sup> C. Coglianese and A. Lai, *Algorithm vs. algorithm*, 1324-1337.

<sup>94</sup> G. Pinotti, *Amministrazione digitale algoritmica e garanzie procedurali*, 89.

Isaac Martín Delgado

openness is required:<sup>95</sup> there is a need to disclose the values of the source code both in mathematical terms and as purposes, which are configured as conditions of legitimacy. In short, the decision to use algorithms in the context of an administrative procedure or for the development of an administrative activity must be public. Therefore, we need to implement a prior approval process for these systems.<sup>96</sup>

The focus should not only be on why the decision was adopted, but also on the decision-making process.

*Third.-* Creating a specialized, independent oversight body. In the exercise of their supervisory functions, these specialized

<sup>95</sup> K. Miller holds that legitimacy and reasonableness of algorithm-based decisions depend on the transparency of the decision-making system: K. Miller, *The application of Administrative Law Principles to technology-assisted decision-making*, in *AIAL Forum*, 86, 2016, 31.

<sup>96</sup> Its practical value can be better seen in specific cases. It is worth examining the use by the Andalusian Regional Government of a robotic automation solution for awarding thousands of subsidies to self-employed workers under Regional Decree 622/2019, of 27 December, on E-government. Together with the safeguards of Article 41 LRJSP, Article 40 of the regional decree requires the need for the prior approval of any activities subject to automated administrative decision-making. See a critical view in E. Benítez Palma, *La transformación digital del control externo del gasto público*, in *Auditoria Pública*, No. 76, 2020, 19-30, available at <https://asocex.es>.

J. Valero is one of the greatest advocates of prior approval processes for AI systems in Spain. Based on Art. 41 LRJSP, he considers that prior approval is an essential pre-requirement for appropriately protecting citizens' rights and interests. He is also in favor of establishing autonomous *ad hoc* boards to hear any appeals against (i) AI-driven administrative acts; and (ii) the implementation of algorithmic systems. See J. Valero, *Las garantías jurídicas de la inteligencia artificial*, 87 and 91. In the same vein, derived from the consideration that the algorithms are regulations, A. Boix, *Algorithms as Regulations: Considering Algorithms, when Used by the Public Administration for Decision-making, as Legal Norms in order to Guarantee the proper adoption of Administrative Decisions*, in *European Review of Digital Administration & Law – Erdal*, 2020, Vol. 1, Issue 1-2, 75-99.

E. Carloni holds that the administrative *lex certa* principle governs fully automated processes, thus only requiring a prior enabling provision. Conversely, he claims that for semi-automated processes it would suffice to apply the general principles of autonomy and organizational discretion. See E. Carloni, *I principi della legalità algoritmica*, 295.

A.G. Orofino argues that the adoption of the programming rules must be formalized in an administrative act: A.G. Orofino, *La automazione amministrativa: imputazione e responsabilità*, in *Giornale di diritto Amministrativo*, 2005, 1308-1309.

administrative bodies would be responsible for approving the algorithmic codes and their specific operational structure, as well as for ensuring proper functioning during the algorithm's life cycle.<sup>97</sup> Article 41 LRJSP (currently in place) requires that the body or bodies competent for monitoring algorithmic quality and, if appropriate, auditing the system and its source code, be determined prior to taking automated administrative action. Therefore, this provision is indirectly requiring that these duties be performed in practice.<sup>98</sup> However, specialization is key in AI-related matters. These specialized bodies would support the judicial review performed by judicial-administrative courts. The paradigm shift brought by algorithms has a major implication: scrutiny and oversight must focus on programming and not only on decision-making.<sup>99</sup>

Although using different names—deterministic and non-deterministic, conditional and non-conditional, or code-driven and data-driven algorithms—a distinction is often made between algorithms that faithfully follow pre-existing programming patterns and algorithms that learn from input data. In any event, from a legal perspective, it is essential to focus on a twofold aspect: (i) how the legal provisions enforced by algorithms (whether by

<sup>97</sup> A. Cerrillo has advocated for creating independent oversight agencies to monitor the algorithms used by public authorities. These agencies could be supported or assisted by auditing entities. See A. Cerrillo, *El impacto de la inteligencia artificial en el Derecho Administrativo*, 2019, 27. M. Moreno Rebato agrees. See M. Moreno Rebato, *Inteligencia Artificial (Umbrales éticos, Derecho y Administraciones Públicas)*, 81. He argues that such an independent oversight entity could be tasked with assessing compliance with the established technical and legal requirements and the impact on citizens' rights, by examining the system's source code, the data and other documents.

<sup>98</sup> E. Gamero Casado, *Compliance (o cumplimiento normativo) de desarrollos de Inteligencia Artificial para la toma de decisiones administrativas*, in *Diario La Ley*, No. 50, 2021, 3.

J. Ponce considers algorithm audits a feasible alternative in cases where full disclosure—access to the source code—is impossible or not advisable: J. Ponce, *Inteligencia artificial, Derecho administrativo y reserva de humanidad*, 46. G. Vestri claims that these auditing and oversight duties be conducted by private companies independently and confidentially. See G. Vestri, *La inteligencia artificial ante el desafío de la transparencia algorítmica*, in *Revista Aragonesa de Administración Pública*, No. 56, 2021, 391.

<sup>99</sup> M.L. Gómez Jiménez, *Automatización procedimental y sesgo electrónico*, 140.

supporting a decision or making the decision altogether) have been translated into computer code; and (ii) the input data used by the system to operate and to accomplish its design objective. Accordingly, there should be two ways of challenging an algorithmic-driven decision: (i) a direct appeal against the adopted decision on the grounds that it is unlawful; and (ii) an indirect appeal, based on (a) a misinterpretation of the applicable legal provisions at the time of designing the system; or (b) faulty input data or defective training.<sup>100</sup>

Certification of an AI system's transparency, accountability and fairness<sup>101</sup> can help in accomplishing this objective. Appointing persons within an organization responsible for ensuring regulatory compliance in the design and use of AI systems is also necessary. Additionally, it can be helpful to establish a register of the algorithms and AI systems used by public authorities,<sup>102</sup> as a tool to promote transparency vis-à-vis citizens regarding the existence thereof. However, lacking a direct link with citizens, these safeguards do not suffice from the perspective of the legitimacy of administrative action. So, in addition to assessment and certification bodies and systems we need to implement appropriate accountability mechanisms.<sup>103</sup>

In simple terms, insofar as algorithmic-driven decisions can be explained by the way algorithms have been programmed and enforce rules, we need to be aware and assess these aspects in order to control such algorithmic decision-making.<sup>104</sup>

On top of that, it is key to rethink human resource selection, organization and management.<sup>105</sup> Public authorities can no

longer be "enslaved" to the private sector regarding the use of technology. This does not mean that all technological developments within an administrative sphere must be public. Indeed, private sector cooperation and partnership is indispensable, but we do need to advance public authorities' capacity to create public algorithms.

Finally, ethics should be at the center of the debate and the analysis regarding the use of algorithms and algorithmic system programming, although never *in lieu* of the law.

So, before embracing smart administration (i.e., smart government) as the new paradigm of administrative law, we must further examine the notion of rational government, i.e., "irrationality-less" public authorities that act rationally because they rely on algorithms and appropriately manage big data, thus being able to make sounder and more logical decisions.

Public authorities apply and enforce the law based on the information and technology at their disposal. Automation and AI provide access to a larger amount of information, and they allow for better data processing. Consequently, automation and AI exceed human knowledge-generating abilities. Law cannot be reduced to the much more restricted circle of rationality,<sup>106</sup> although operational rationality applied to administrative organization and procedure can render administrative action more effective and objective.<sup>107</sup> Algorithms are not, by themselves, a source of authority. Rather, they are instruments at public authorities' service. Us human beings are more than data. An administration will never be "intelligent" if it fails to fulfill the relevant principles and safeguards. This is the key to striking the right

<sup>100</sup> M. Hildebrandt, *Algorithmic regulation and the rule of law*, 3.

<sup>101</sup> See *Ethics Guidelines for Trustworthy AI*, 28.

<sup>102</sup> This claim is made by A. Soriano Aranz, *Decisiones automatizadas: problemas y soluciones jurídicas*, 115; and O. Cortés, who also argues that periodic inspections would be necessary to verify the operation of any registered algorithms: O. Cortés, *Algoritmos y algunos retos jurídico-institucionales para su aplicación en la Administración Pública*, in *Revista Vasca de Gestión de Personas y Organizaciones Públicas*, No. 18, 2020, 59.

<sup>103</sup> J.A. Pinto Fontanillo, *El Derecho ante los retos de la Inteligencia Artificial. Marco ético y jurídico*, Madrid, Edisofer, 2020, 91.

<sup>104</sup> J. Cobbe, *Administrative Law and the Machines of Government*, 8.

<sup>105</sup> On this topic, see a comprehensive approach in R. Galindo Galdés, *Automatización, inteligencia artificial y empleados públicos*, in *Retos jurídicos de la*

*inteligencia artificial*, A. Cerrillo i Martínez and M. Peguera Poch. Cizur Menor, Thomson-Reuters Aranzadi, 2020, 93 ff. From the perspective of political science, C. Ramió, *Inteligencia Artificial y Administración Pública, in totum*, has very interesting insights.

<sup>106</sup> V. Frosini, *Cibernética, Derecho, Internet y Sociedad*, 38.

<sup>107</sup> S. Barona Vilar contends that technological devices have given way to a new life ideology that is directly connected with the control of individuals and that therefore calls for major efforts to preserve the pre-existing values and human rights, which are at risk of being seized or voluntarily surrendered. See S. Barona Vilar, *Algoritmización del Derecho y de la Justicia. De la Inteligencia Artificial a la Smart Justice*, Valencia, Tirant lo Blanch, 2021, 17.

Isaac Martín Delgado

balance between algorithms and administrative action. Right now, a precondition for this balance is to use algorithmic systems to collect information relying on data and subsequently making it available to human decision-makers. Thus, within the public sector, it is for humans to implement the transition from mere computation to decisions with an impact on the real world.

The history of administrative law is a struggle between power and freedom.<sup>108</sup> When it comes to technology, and AI in particular, we broaden the boundaries of knowledge, but that does not necessarily entail that we loosen the boundaries of freedom.<sup>109</sup> Striking a fair balance requires to review categories, legal institutions, concepts and contexts. Then, we must carefully and appropriately assess the potential clashes between (i) the new challenges posed by the public-sector use of AI; and (ii) citizens' principles and rights. That was—with a limited scope—the ultimate aim of this paper.

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<sup>108</sup> E. García de Enterría, *La lucha contra las inmunidades del poder en el Derecho Administrativo (poderes discrecionales, poderes de Gobierno, poderes normativos)*, in *Revista de Administración Pública*, No. 38, 1962, 159-208.

<sup>109</sup> J.M. Lasalle, *Ciberleviatán*, 78.