

Artificial Intelligence in Government: Risks and Challenges of Algorithmic Governance in the Administrative State

JOSÉ VIDA FERNÁNDEZ*

ABSTRACT

This article analyzes the legal implications of using artificial intelligence in government and how it is challenging the foundations of the administrative state. It begins by demonstrating that a new model of government is emerging, based on information and intelligence (i-Gov). To understand the nature and scope of this new i-Gov model, this article will explain what artificial intelligence really is and analyze the applications that are currently being carried out in the US and the EU. Next, it will review the regulatory framework that is emerging that regulates government use of artificial intelligence in both the US and the EU. Finally, the article concludes by identifying and analyzing the main legal and policy problems involved in the use of artificial intelligence in government. It challenges values, principles, and institutions of the traditional administrative state and also requires us to think of new frameworks for constitutional and administrative law to guarantee citizens' rights and public interest.

I. INTRODUCTION

Artificial intelligence (AI) is set to transform human life in all its dimensions. Although this may sound somewhat exaggerated and disturbing, it is a process that has already happened with other disruptive technologies. That is the case with the development and

*Professor of Administrative Law, Public Law Department, Universidad Carlos III de Madrid. This work is part of the research projects "Artificial intelligence in the national health care system: solutions to specific legal problems" (PID2021-128621NB-I00) and "The Impact of Artificial Intelligence in Public Services: A Legal Analysis of its Scope and Consequences in Healthcare" (PGC2018-098243-B-I00) directed by José Vida Fernández and founded by the Ministry of Science and Innovation of Spain (MCIN/AEI/10.13039/501100011033/) and by "FEDER: A way of Making Europe."

expansion of the internet since the beginning of the century, which has brought about major changes in our economies, societies, politics, and personal lives.

Nevertheless, there is something different in this new disruptive innovation that has led to an obsession with AI. Although the impact of AI is not yet widespread and overt, there is a worldwide debate on how it will change our work, health, education, entertainment, personal relationships, and many other aspects of our lives. Yet, the key point of this debate is not about the timing or intensity of this transformation, but on how AI may transform human nature and its role in our lives. AI does not involve a transformation in the sense of how we carry out our activities (economic, social, personal) with the removal of physical constraints (distances, storage, etc.) as the internet does, but rather AI affects how the end product is achieved since it performs the activities by replacing the human factor.

Concern about this technology has led to an increasing number of studies on the legal implications of AI systems. However, most of this analysis focuses on the legal consequences of AI in the private sector and how it impacts individuals (companies, families, or citizens) and their rights (privacy, competition, intellectual property, work conditions, liability). In contrast, few studies focus on the application of AI in the public sector, particularly in government functions, and how it impacts the exercise of public power and citizens' rights.

This paper analyzes the legal implications of using AI in government from a general perspective, including all three branches of government, but it focuses on administrative activities, from government decisions to service provisions. Although each country faces digital transformation in line with their own constitutional and administrative tradition, there are some common challenges related to the use of AI in the public sector which can be considered as global issues. Therefore, the purpose of this piece of work is to identify these global challenges by carrying out a comparative analysis of the United States (US) and the European Union (EU).

The premise is the change that is taking place in the digitalization of government, which has gone from an online government (e-Gov) to an information-intelligent government (i-Gov), changing its nature and characteristics (Section II). In order to understand the meaning and scope of this change that leads to an i-Gov, AI is analyzed from a legal perspective as this disruptive technology must be understood in order to capture the legal implications of the change that it produces (Section III). It is also necessary to explore how AI is being used in government action to understand the real implications that it may have, without relying on science fiction scenarios (Section IV). Once we determine

what AI is and how it is used in government, it is necessary to identify the legal framework that applies to it, which is emerging in both the US and the EU in new ways (Section V). To conclude, the analysis of the legal implications of AI use in government highlights the inadequacies of the current administrative state as it cannot adequately handle the many challenges that arise. These inadequacies require new tools and strategies to guarantee constitutional rights and values (Section VI).

In any case, it should be noted that this work does not attempt to find solutions to the challenges for AI use in government at this time, as they are not well-defined enough. The aim is to offer a good diagnosis by identifying and understanding these challenges and their context, as a preliminary step in the search for solutions that can save the administrative state as we know it today.

II. A NEW ERA IN GOVERNMENT DIGITALIZATION: FROM E-GOV TO I-GOV

The Digital Revolution is reshaping our world, and it affects both the private and public sector. The impact of new information technology is well known in its private dimension, and although technological changes are quickly digested, we can still marvel at the transformation in our economy (with a digital global market without limits or distances, both for companies and individuals), our learning and entertainment (accessing an endless amount of content on different platforms), our personal relationships (reaching whoever we want and interacting with millions of people through social networks), and so on.

Digital advances are also transforming government and, in particular, public service performance, although the achievements are much less spectacular and glamorous than in the private sector. The problem is that government has to follow many regulations that include restrictions and requirements, so it is not free to incorporate the technological innovations that corporations or individuals can. First, although many government activities are similar in substance to those of companies and other private entities (information management, decision-making, service provision, etc.), it implies the use of government power, therefore the incorporation of technological innovations must be previously validated and approved. In addition to this, there are a significant limitations when new digital solutions are acquired under public procurement rules, and there is also the challenge of training public civil servants and personnel.

A. *Online Government: e-Gov*

Despite all these difficulties, governments have not remained

oblivious to technological change and have incorporated information technologies that are also transforming the venerable administrative state that is leading to a change of the model. However, digital transformation for government has so far been limited to so-called online government (e-Gov), which essentially consists of putting government online, as it is based in one specific technology, such as the internet, and its sole purpose is to enhance interaction by eliminating the spatial and temporal barriers that separate government from its citizens.¹ E-Gov is purely instrumental, but not substantial, as it is limited to considering interactions between the government and its citizens by streamlining information distribution and service provision, but without the ability to change the model or essence of government.²

This is the experience in the US, where the digital transformation of the federal government began at the turn of the century and has been limited to generalizing e-Gov services and processes promoting the use of the internet and other information technologies to provide increased opportunities for citizen participation. In particular, the E-Government Act of 2002 was passed to enhance citizen access to government information and services and improve government transparency and decision-making through the use of the internet.³ The Office of E-Government and Information Technology was created to promote the use of internet-based technologies to make it easier for citizens and businesses to interact with the federal government, save taxpayer dollars, and streamline citizen participation.⁴

1. This approach to e-Gov still prevails internationally as can be seen in the United Nations' e-Gov development index that is based primarily on the Online Services Index. See UNITED NATIONS, E-GOVERNMENT SURVEY 2022: THE FUTURE OF DIGITAL GOVERNMENT (2022). On the concept of e-Gov, see J. E. J. Prins, *Electronic Government. Variations on a Concept*, in DESIGNING E-GOVERNMENT. ON THE CROSSROADS OF TECHNOLOGICAL INNOVATION AND INSTITUTIONAL CHANGE, 1–5 (2001). See also Robert M. Davison et al., *From Government to E-government: A Transition Model*, 18 INFO. TECH. & PEOPLE 280–99 (2005).

2. E-Gov has also been defined as an interaction of a "managerial" nature, which dominates over the "consultative" and "participatory" interaction models. See Andrew Chadwick & Christopher May, *Interaction Between States and Citizens in the Age of the Internet: "E-Government" in the United States, Britain, and the European Union*, 16 GOVERNANCE: INT'L J. POL'Y, ADMIN. & INST. 271 (2003).

3. E-Government Act of 2002, Pub. L. No. 107-347, 116 Stat. 2902 (defining electronic government as the "use by the Government of web-based Internet applications and other information technologies, combined with processes that implement these technologies, to . . . enhance the access to and delivery of Government information and services to the public, other agencies, and other Government entities; or . . . bring about improvements in Government operations that may include effectiveness, efficiency, service quality, or transformation").

4. For further information on Federal e-Gov strategy, see Office of the Federal Chief Information Officer, THE WHITE HOUSE (last visited Feb. 6, 2023), <https://www.white>

At the same time, the EU has been promoting e-government policies for its development in the member states since 2000.⁵ It should be noted that the EU does not have the capacity to implement e-Gov, so its development across Europe has been fragmented at the national level. The EU can only support the actions of the member states; it cannot enforce how national agencies are organized or function. Therefore, the EU has promoted the expansion of e-Gov in member states through coordination and benchmarking actions,⁶ under a model based on online access through the internet to eliminate distances and reduce time in government access.⁷

Therefore, as in the American and European models, IT has so far been used worldwide as a passive instrument in government, either to improve internal activities (computers, databases) or to facilitate interaction with citizens and to provide permanent access (online services). Thus, up to now, digital technologies have been just a means for governance, and have not been an instrument for administrative reform as the government's activity has remained essentially unchanged, even though it has developed through IT.⁸

B. Disruptive Technologies

However, major changes are underway as IT innovations are accelerating and leading to developments that are increasingly far-reaching and transformative in nature. Big data, cloud computing,

house.gov/omb/management/egov/; see also Rachel Silcock, *What is E-Government*, 54 PARLIAMENTARY AFFS. 88 (2001); John C. Reitz, *E-Government*, 54 AM. J. COMP. L. 733, 733 (2006); Shannon Howle Schelin, *E-Government: An Overview*, in G. DAVID GARSON, MODERN PUBLIC INFORMATION TECHNOLOGY SYSTEMS: ISSUES AND CHALLENGES 110, 113 (2007).

5. *Communication from the Commission to the Council, the European Parliament, The European Economic and Social Committee and the Committee of the Regions – the Role of e-Government for Europe's Future*, at 7, COM (2003) 567 final (Sept. 26, 2003) (defining e-Government as “the use of information and communication technologies in public administrations combined with organisational change and new skills in order to improve public services and democratic processes and strengthen support to public policies”).

6. The successive European Union digital strategies have included EGOVERNMENT ACTION PLANS (2005–2011, 2011–2015, and 2016–2020) as a specific instrument to coordinate and pool the efforts of member states' e-Government strategies and activities.

7. On the E.U. perspective of e-Gov, see Clara Centeno et al., *A Prospective View of e-Government in the European Union*, 3 ELEC. J. E-GOV'T 59, 62 (2005); PAUL G. NIXON & VASSILIKI N. KOUTRAKOU, E-GOVERNMENT IN EUROPE, RE-BOOTING THE STATE (2007).

8. See Kenneth Kraemer & John Leslie King, *Information Technology and Administrative Reform: Will E-Government Be Different?* 2 INT'L J. ELEC. GOV. RSCH. 1 (2006) (arguing that IT has never been an instrument of administrative reform, rather, it has been used to reinforce existing administrative and political arrangements).

blockchain, and artificial intelligence have developed strongly in the last decade. These are disruptive technologies that will lead to great economic, social, and political transformation in the coming years.

Within all of these new IT advances, AI stands out to the point that there is real AI fever and excitement. The present relevance of AI is explained, on the one hand, by its huge technological development in recent years, and, on the other hand, by the extraordinary capabilities that it has acquired, making it the technology with the greatest capacity for transformation.⁹

Regarding the technological development of AI, it should be noted that although it is a technology that has been around since the middle of the last century, only in the last decade has there been a real push for three overlapping factors: firstly, advances in deep learning that make it possible to solve new problems; secondly, the explosion of big data, which, thanks to cloud computing, makes it possible to capture, store, share, and manage large amounts of higher quality data; and finally, the constant growth of computing power that allows AI to solve problems in less time.

With regards to transformative capacity, there is a general consensus that AI is permanently at the forefront of disruptive technologies because of its enormous disruptive capacity in all industries, including agriculture (productivity forecasting or autonomous tractors), to health care (refining diagnosis or discovering new drugs), and education (personalized learning, etc.).¹⁰

C. AI National Strategies

All countries have taken the thrust of AI seriously, and this can be seen in the numerous strategy memorandums and legislation on AI that have been adopted since the end of the last decade with different approaches.

In the case of the United States, the priority for plans and legislation adopted since 2016 has been to ensure continued US

9. See DARRELL M. WEST & JOHN R. ALLEN, TURNING POINT: POLICYMAKING IN THE ERA OF ARTIFICIAL INTELLIGENCE (2020); see also KATE CRAWFORD, ATLAS OF AI: POWER, POLITICS, AND THE PLANETARY COSTS OF ARTIFICIAL INTELLIGENCE (2021); ERIK J. LARSON, THE MYTH OF ARTIFICIAL INTELLIGENCE: WHY COMPUTERS CAN'T THINK THE WAY WE DO (2021).

10. See *Disruptive Technologies: Advances That Will Transform Life, Business, and the Global Economy*, MCKINSEY DIGITAL 18, 35, 47, 58, <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/disruptive-technologies> (last visited Jan. 13, 2023). After ten years, AI still remains at the head of disruption in *McKinsey Technology Trends Outlook 2022*, at 22, <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-top-trends-in-tech> (last visited Jan. 13, 2023).

leadership in the development and use of AI systems both for public and private sectors.¹¹ In 2020, Congress passed the National AI Initiative Act to coordinate a program within the federal government to accelerate AI research and its application for national economic prosperity and security. It also included the creation of the National AI Initiative Office to coordinate and support the National AI Initiative.¹² Thus, the US strategy has been devoted to having more and stronger AI systems driving innovation, so as not to lose momentum to other innovative countries like China. Special consideration has been given to AI in the public sector. The 2020 AI in Government Act was passed to facilitate, improve, and coordinate the adoption and use of AI within the federal government under the AI Center of Excellence program.¹³

The EU has also adopted a Europe-wide strategy that seeks a different kind of leadership for AI in Europe. This is demonstrated in the 2018 AI Commission Communication for Europe, the 2020 White Paper on AI, and the 2021 Communication Fostering a European Approach to AI.¹⁴ The objective is to create an AI “made in Europe” that is distinguished by being trustworthy, secure, and ethical. For this purpose, a proposal for a regulation laying down harmonized rules on AI (the so-called AI Act) is in the pipeline.¹⁵ Regarding the use of AI in the public sector, the EU has not prepared specific legislation or plans since

11. The National Science and Technology Council prepared a strategic plan, NETWORKING & INFO. TECH. RSCH. & DEV. SUBCOMM., NAT'L SCI. & TECH. COUNCIL, NATIONAL AI RESEARCH AND DEVELOPMENT STRATEGIC PLAN (2016), that defined strategic priorities for AI R&D. Later, in 2019, it was signed into executive order, Exec. Order No. 13859, 84 Fed. Reg. 3967 (Feb. 14, 2019), and in 2020, Congress passed the National Artificial Intelligence Initiative Act of 2020, H.R. 6216, 116th Cong. (2020).

12. *National Artificial Intelligence Initiative*, ai.gov (last visited Jan. 13, 2023).

13. AI IN GOVERNMENT ACT OF 2020 was preceded by Exec. Order No. 13960, 85 Fed. Reg. 78939 (Dec. 8, 2020), which established principles for a common and expert use of AI within the federal government. The AI Center of Excellence was created as a program within the General Services Administration that operates within GSA Centers of Excellence (CoE). See *The Centers of Excellence*, IT MODERNIZATION CENTERS OF EXCELLENCE, <https://coe.gsa.gov> (last visited Jan. 13, 2023).

14. The E.U. strategy on AI is included in the *Communication from the Commission on Artificial Intelligence for Europe*, COM (2018) 237 final (Apr. 25, 2018); *Artificial Intelligence – A European Approach to Excellence and Trust*, COM (2020) 65 final (Feb. 19, 2020); *Communication for the Commission on Fostering a European Approach to Artificial Intelligence*, COM (2021) 205 final (Apr. 21, 2021). Member states have also adopted their own national AI strategy, such as Germany, STRATEGIE KÜNSTLICHE INTELLIGENZ DER BUNDESREGIERUNG (November 2018), France, DONNER DU SENS À L'INTELLIGENCE ARTIFICIELLE: POUR UNE STRATÉGIE NATIONALE ET EUROPÉENNE (Mar. 2018) or Spain, ESTRATEGIA NACIONAL DE INTELIGENCIA ARTIFICIAL (Nov. 2020).

15. *Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts*, COM (2021) 206 final (Apr. 21, 2021).

it has no competence in this area, so member states have their own strategies for implementing AI in government.¹⁶

D. Toward Information and Intelligence: i-Gov

As can be seen, the concern about the impact of AI worldwide is growing and affects the public sector. In fact, there is a belief that AI can be as transformative in the private sector as in the public. The use of AI-based tools in decision-making, adjudication, enforcement, and public services can take government digitalization to a new level beyond human decision-making limitations.¹⁷

AI can lead to many positive developments. It can help improve government processes and procedures; design and meet strategic goals; reduce costs and environmental impacts; combat fraud, waste, and abuse by enhancing oversight of public funds; increase efficiency and mission effectiveness; improve quality of services; improve safety; and support decision-making.

According to the characteristics of AI, digitalization will no longer be passive but active, as it affects administrative decision-making and the service delivery process. In many uses of AI, the technology ceases to be a mere instrument as it can assume the essence of government decisions; however, there is a risk that AI stops being a means, and that in reality, it becomes an end.

According to the transformative capacity, it is far from discussion that the use of AI initiates a new period in the digital transformation of government that may modify its nature. Therefore, we are leaving the e-Gov behind and entering the i-Gov era, a government based on flows of information and intelligence.¹⁸ The range and relevance of this change is yet to be defined, as it will depend on how AI is incorporated into government action. In any case, it is necessary to reflect now on the possible challenges and the perils of this process because it is likely to transform the foundations and principles of the administrative state, as

16. The national AI in government strategies in EU member states are usually included in broader strategies on government digitalization: in France, PUBLIC ACTION 2022; in Italy, THREE-YEAR PLAN FOR IT IN THE PUBLIC ADMINISTRATION; in Spain, PUBLIC ADMINISTRATION DIGITALIZATION PLAN 2021-2025.

17. Physical limitations include memory capacity, fatigue, aging, impulse control, perceptual inaccuracies; biases include endowment effect, loss aversion, system neglect, hindsight bias, availability bias, confirmation bias, framing, anchoring, susceptibility to over persuasion and implicit racial and gender biases. CARY COGLIANESE, A FRAMEWORK FOR GOVERNMENTAL USE OF MACHINE LEARNING, 8–20 (2020).

18. GOVERNANCE AND INFORMATION TECHNOLOGY: FROM ELECTRONIC GOVERNMENT TO INFORMATION GOVERNMENT (Viktor Mayer-Schonberger & David Lazer eds., 2007); *see also* CORIEN PRINS ET AL., IGOVERNMENT (2011).

discussed below.

III. WHAT REALLY IS ARTIFICIAL INTELLIGENCE? AN APPROACH FOR LAWYERS

To better understand the actual scope of this transition from e-Gov to i-Gov, it is necessary to have a good understanding of the technology that is causing it. There is a great deal of confusion surrounding AI, and it is common to believe that this technology can solve problems and do things that humans are not capable of.¹⁹ Science fiction literature has anticipated problems regarding AI, and even has proposed the first solutions—as the Asimov’s robotic laws²⁰—but all this refers to an imaginary world more than an actual technology. Therefore, the scope of this section is devoted to explaining the technological grounds of AI, but in a way that is accessible to non-specialists.

A. *Demystifying AI*

It is important to start demystifying AI, affirming that AI is not intelligence, or more precisely, actual human intelligence. As it emulates human cognitive functions, it causes great confusion, even some people consider AI to have not only human skills but also qualities.²¹ Without going that far, it is true that many people attribute human-like reasoning capabilities to AI systems, considering that they can carry out activities like any person, as AI is defined as programs with abilities that normally require human intelligence.²²

In order to close the debate about AI and its human skills, it must be clear that the so-called general or strong AI that resembles human intelligence (developing general and abstract thinking to perform different tasks) has not yet been created and it will probably not be

19. See ERIK J. LARSON, *THE MYTH OF ARTIFICIAL INTELLIGENCE-WHY COMPUTERS CAN'T THINK THE WAY WE DO* (2021).

20. Isaac Asimov, *Runaround*, in *I, ROBOT* 27 (Gnome Press, 1950).

21. See Nico Grant & Cade Metz, *Google Sidelines Engineer Who Claims Its A.I. Is Sentient*, N.Y. TIMES (June 12, 2022), <https://www.nytimes.com/2022/06/12/technology/google-chatbot-ai-blake-lemoine.html> (providing an example of an engineer who believed an AI showed lifelike qualities).

22. *Artificial Intelligence*, OXFORD REFERENCE, <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803095426960>; Francesca Bigami, *Artificial Intelligence Accountability of Public Administration*, 70 AM. J. COMP. L. 312, 313–15 (2022) (discussing the definition of AI from a legal perspective).

created in the near future.²³ The AI that exists today has very specific functions, and it can solve only specific problems, so it can be merely applied to very specific tasks.²⁴ AI systems can perform these specific tasks with better results than humans—as it is the case of playing chess, photo recognition, or, in a near future, driving cars—and they are even able to solve different problems with the same program. But these systems are not able, up to now, to interrelate knowledge or produce abstract thinking. Therefore, it is not possible for an AI to write a real novel—that includes original elements like humor or irony—or produce theories that interpret or explain reality.

Even considering only narrow AI, it is possible to find many definitions of AI from different perspectives—from the philosophical to the economic or technical point of view. To avoid never-ending debates about the nature and essence of AI, it is better to focus on the legal definition settled both in the United States (National AI Initiative Act of 2020)²⁵ and in the European Union (Proposal of AI Act of 2021).²⁶

According to these legal definitions of AI, we can conclude that these systems consist of software that is run on computers. This seems to be a simple conclusion, but it is an important starting point as it allows us to identify AI systems as a chain of commands that are run by machines and not necessarily requiring or needing physical assistance. So, we can

23. See AMNON H. EDEN, ET AL., SINGULARITY HYPOTHESES: A SCIENTIFIC AND PHILOSOPHICAL ASSESSMENT 1 (2013) (discussing the ethical, social, and legal challenges, or “technological singularity,” of general AI).

24. STUART RUSSELL & PETER NORVIG, ARTIFICIAL INTELLIGENCE: A MODERN APPROACH 27–31 (2016).

25. The National Artificial Intelligence Initiative Act of 2020 defined AI as “a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments” that “use[s] machine and human-based inputs to: (A) perceive real and virtual environments; (B) abstract such perceptions into models through analysis in an automated manner; and (C) use model inference to formulate options for information or action.” 15 U.S.C. § 9401(3) (2022).

26. Article 3(1) of the Proposal of AI Act defines AI as “software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with.” Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts, at 34 SEC (2021) 167 final (Apr. 4, 2021). Annex I lists the following AI techniques and approaches: “(a) Machine learning approaches, including supervised, unsupervised and reinforcement learning, using a wide variety of methods including deep learning; (b) Logic and knowledge-based approaches, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deductive engines, (symbolic) reasoning and expert systems; (c) Statistical approaches, Bayesian estimation, search and optimization methods.” *Id.*

distinguish between AI and robotics, as the majority of robots operate without AI, such as an industrial robotic arm in a factory, and many AI systems only operate virtually, like the Google photo recognition or Netflix prediction.

B. AI Algorithm

Despite this distinction, it must be said that AI systems are ultimately nothing more than software. It is true that they are a special kind of program as they are based on a new generation of algorithms. In fact, what really defines AI is the type of algorithms that are used in its programming, considering an algorithm as a process or a set of rules to solve a problem or perform a calculation.²⁷

In conventional algorithms, programs are created manually by providing input data and the rules to follow, so the algorithm produces the output by automatically performing a task as instructed by the programmer. These conventional algorithms are used in entirely deterministic systems that are self-executing. Therefore, they are fully predictable as they basically consist of simple or complex decision trees; this is the so-called code-drive regulation.²⁸

In AI or predictive algorithms, the input and output data are fed to the algorithm, so it creates the rules to solve the problem as it is coded to learn to perform a task autonomously. The singular design of AI algorithms gives them some exclusive functions, such as providing predictions, recommendations, or decisions to achieve specific objectives. They do so by continuously learning about data from the environment or from the results of its actions. These algorithms are informed by the data on which they have been trained instead of being informed by a programmer that has translated their insights into code. There is no deterministic code, and it introduces a new type of discretion, situated in the design choices made when training the algorithms; this is the so-called data-driven regulation.²⁹

C. Further Remarks

At this point, some observations are needed on the nature of the predictive algorithms on which AI systems are built. Although AI

27. See Justice Against Malicious Algorithms Act of 2021, H.R. 5596, 117th Cong. § 2(a)(1)(7) (2021) (defining algorithms, which is valuable because no legal definition of algorithms exists yet).

28. See Mireille Hildebrandt, *Algorithmic Regulation and the Rule of Law*, 3 PHIL. TRANSACTIONS ROYAL SOC'Y 376 (2018).

29. *Id.*

systems are probabilistic (nondeterministic) and they create the rules to solve problems, they are not autonomous and even less creative. These systems can only solve specific problems within a given set of human-defined objectives. So, AI systems do not find and solve problems by themselves, and they do not look for solutions beyond the objectives and ranges previously defined by humans, as they are part of a narrow AI.

It should also be noted that AI systems produce outputs, such as content, predictions, recommendations, or decisions influencing the environments they interact with. In this regard, AI systems do not actually interact with their environment to influence or modify it deliberately. AI systems act as imitators of the human mind, and therefore, must be able to “notice” what is going on around them, process that information, and be able to draw conclusions from it, while inferring new conclusions that have not been previously preprogrammed by a human being. As they have no freewill, they interact with the environment by merely receiving new input or output data within the terms that have been determined by humans.

The main technique behind the AI systems is machine learning, so-called as these systems are capable of changing their behavior to enhance their performance on some tasks through experience.³⁰ But these AI machine-learning based systems do not “learn” in the way that humans do but instead undergo mathematical “training” and “improve” their results in statistical terms. They are used to detect patterns in data in order to automate complex tasks or make predictions. They can produce automated results similar to those that would have been made by a human, so it would appear that they are learning and that they are “intelligent.”³¹ Machine learning divides into two models, supervised and unsupervised learning, differentiated by the degree of human intervention in the algorithm learning process.³²

30. STUART RUSSELL & PETER NORVIG, *ARTIFICIAL INTELLIGENCE: A MODERN APPROACH* 693 (3d ed. 2010); see Cary Coglianese & David Lehr, *Regulating by Robot: Administrative Decision Making in the Machine-Learning Era*, 105 *GEO. L.J.* 1147, 1156–60 (2017); David Lehr & Paul Ohm, *Playing with the Data: What Legal Scholars Should Learn About Machine Learning*, 51 *U.C. DAVIS L. REV.* 653, 669–702 (2017) (discussing machine learning and how it works).

31. Harry Surden, *Machine Learning and Law*, 89 *WASH. L. REV.* 90 (2014).

32. In supervised learning, algorithms work with labeled data, trying to find a function that, given the input data, assigns the appropriate output label. The algorithm is trained with a “history” of data and thus “learns” to assign the appropriate output label to a new value, i.e., it predicts the output value (this model is used for email spam filters). Unsupervised learning systems are trained with raw, unlabeled data, so we only know the input data, but there is no output data corresponding to a given input. Therefore, we can only describe the structure of the data, to try to find some kind of organization that simplifies the analysis in an exploratory way (this model is used in recommendation systems). See Osvaldo Simeone, *A Very Brief Introduction to Machine Learning with*

AI systems produce several problems and pose several questions when used for decision-making.³³ First, the problem of transparency, since many of these algorithms are black boxes, which means that it is not possible to know how the given problem is solved. The second problem is that of bias, as AI systems are probabilistic and tend to perpetuate trends without taking into account principles such as equality or equity. All of these technical problems become relevant legal problems when AI systems are used for government, as we shall see.

IV. FROM SCIENCE FICTION TO REALITY: ACTUAL AI USES IN GOVERNMENT

Once AI has been defined as a software with singular characteristics that offers new functionalities that can help or even substitute human actions, we can explore what the actual AI uses in government are. The purpose of this section is to show the differences in the use of AI within government. AI systems are used with different purposes, so the legal implications of AI depend on how they are embedded in government actions.

In general, AI can be used by all three branches of government, but it should be noted that its relevance is very different within each branch of government. The challenges are also of a different nature depending on whether AI is used by the legislative, executive or judicial branch.³⁴ We will now take a preliminary approach to the use of AI in the different branches of government, and then focus on the analysis of its application in the executive branch, since this branch offers the greatest potential for its use and, consequently, the one that poses the most problems.

A. *AI in Congress*

In the case of the legislative branch, AI will have a very narrow range in which it can directly or indirectly affect the deliberative process that is inherent to democracy. However, the growing complexity of reality and the need for more precise and technical legislation create

Applications to Communication Systems, 4 IEEE TRANSACTIONS COGNITIVE COMM'NS & NETWORKING 648 (2018).

33. Tal Zarsky, *The Trouble with Algorithmic Decisions: An Analytic Road Map to Examine Efficiency and Fairness in Automated and Opaque Decision Making*, 41 SCI., TECH., & HUM. VALUES 118 (2016).

34. See Ephraim Nissan, *Digital Technologies and Artificial Intelligence's Present and Foreseeable Impact on Lawyering, Judging, Policing and Law Enforcement*, 32 AI & SOC'Y 441 (2015).

new room for AI solutions. AI can be a tool to help Congress make laws more effective, as long as it always remains an ancillary tool since it can distort the legislative process and threaten democracy.

Although there are no specific initiatives in the United States or the European Union, AI systems could be used both *ex ante* to simulate the impact of the proposed legislation and *ex post* to monitor the actual impact of enacted legislation.³⁵ It is likely that AI systems will soon be one of the standard tools used for law making, as impact assessment has become part of the legislative process. In the United States, AI systems could be used by the Congressional Budget Office (CBO) in carrying out cost analysis about the likely effects of proposed legislation on the federal budget. In the EU, the commission could also use AI systems for impact assessments to examine whether there is a need for EU action and analyze the possible impacts of available solutions.

B. AI in the Courts

The judicial branch has been more open to the use of AI, so there are precedents of use for AI in different jurisdictions from a long time ago.³⁶ There are many ways in which AI can be used by courts³⁷: AI can be internally used to assist with information management (digitizing court records and organizing legal information); to assess external circumstances that can be used in judging; and to provide full advice to courts or even be an alternative through online dispute resolution systems.

In particular, predictive AI systems are very relevant in criminal justice as it allows for the possibility to assess recidivism. There are AI systems that aid human decision-making in criminal cases with respect

35. See Joe Mariani, *AI for Smarter Legislation*, DELOITTE INSIGHTS (Sept. 22, 2022), <https://www2.deloitte.com/us/en/insights/industry/public-sector/artificial-intelligence-can-benefit-the-legislative-process.html>.

36. See JUDICIAL APPLICATIONS OF ARTIFICIAL INTELLIGENCE (Giovanni Sartor & L. Karl Branting, eds., 1998) (explaining there are many examples from the Dutch Rechtswijzer (Roadmap to Justice) designed for couples who are separating or divorcing, to the British Columbia Civil Resolution Tribunal that provides a full suite of dispute resolution services); see John Zeleznikow & Fernando Esteban de la Rosa, *Artificial Intelligence as a New Component of the Justice System: How it Creates New Possibilities, but Has Limitations Especially with Regards to Governance*, in JUSTICE, TRADE, SECURITY, AND INDIVIDUAL FREEDOMS IN THE DIGITAL SOCIETY 59 (Fernando Esteban de la Rosa et al., eds., 2021).

37. Cary Coglianese & Lavi M. Ben-Dor, *AI in Adjudication and Administration*, 86 BROOK. L. REV. 798 (2021); see James E. Baker et al., *AI FOR JUDGES*, CENTER FOR SECURITY AND EMERGING TECHNOLOGY (2021) (exploring other ways AI can affect judges); see also A. D. (Dory) Reiling, *Courts and Artificial Intelligence*, 11 INT'L J. CT. ADMIN. 4 (2020).

to questions of bail, sentencing, and parole, like PATTERN, LSI-R, or COMPAS.³⁸ COMPAS is the most relevant of these systems as it has been already used by courts in forty-six states to assess a defendant's likelihood to reoffend, and it adopts pretrial release decisions challenging due process.³⁹

Therefore, predictive AI systems can be useful for the judiciary as they can help judicial decision-making in many ways. However, judging cannot be based only on predictions, as it is a very complex function that includes balance and fairness. The use of AI in courts raises many questions that need to be analyzed in detail,⁴⁰ as it affects the basic guarantees on the right of access to a court, the adversarial principle, the equality of arms, the impartiality and independence of judges, the right to counsel, and so on.⁴¹

For these reasons neither the United States nor the European Union have yet adopted AI systems in courts to make the ultimate, fully automated determination on a legal or factual question substituting human decisions.⁴² Indeed, some judicial claims challenging the court's trial use of AI systems have been dismissed, as it has been considered that the risk assessment algorithms are merely a tool that courts can

38. PATTERN (Prisoner Assessment Tool Targeting Estimated Risk and Needs) is used for risk assessment in federal parole decisions; LSI-R (Level of Services Inventory-Revised) aims to predict a defendant's risk of recidivism; COMPAS (Correctional Offender Management Profiling for Alternative Sanctions), is an AI system for pretrial decisions.

39. From 1998 COMPAS has been used as a criminal risk assessment tool to assess more than one million offenders in US courts. COMPAS has been accused of racial biases and inaccuracy, see Julia Angwin et al., *Machine Bias*, PROPUBLICA, (May 23, 2016), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>; see also Julia Dressel & Hany Farid, *The Accuracy, Fairness, and Limits of Predicting Recidivism*, SCI. ADVANCES (2018).

40. See ETHAN KATSH & ORNA RABINOVICH-EINY, *DIGITAL JUSTICE: TECHNOLOGY AND THE INTERNET OF DISPUTES* (2017); John Zeleznikow, *Can Artificial Intelligence and Online Dispute Resolution Enhance Efficiency and Effectiveness in Courts*, 8. INT'L J. CT. ADMIN. 30, 36–37 (2017); Andrew Lee Park, *Injustice Ex Machina: Predictive Algorithms in Criminal Sentencing*, UCLA L. REV. (2019), <https://www.uclalawreview.org/injustice-ex-machina-predictive-algorithms-in-criminal-sentencing/>; RICHARD SUSSKIND, *ONLINE COURTS AND THE FUTURE OF JUSTICE* (2019); Ray Worthy Campbell, *Artificial Intelligence in the Courtroom: The Delivery of Justice in the Age of Machine Learning*, 18 COLO. TECH L. J. 323 (2020); TANIA SOURDIN, *JUDGES, TECHNOLOGY AND ARTIFICIAL INTELLIGENCE: THE ARTIFICIAL JUDGE* (2021).

41. See EUROPEAN COMMISSION FOR THE EFFICIENCY OF JUSTICE, *EUROPEAN ETHICAL CHARTER ON THE USE OF ARTIFICIAL INTELLIGENCE IN JUDICIAL SYSTEMS AND THEIR ENVIRONMENT* (Dec. 4, 2018) (identifying five principles regarding the use of AI in judicial systems: 1. Principle of respect for fundamental rights; 2. Principle of non-discrimination; 3. Principle of quality and security; 4. Principle of transparency, impartiality and fairness; 5. Principle “under user control”).

42. See Cary Coglianese & Lavi M. Ben-Dor, *AI in Adjudication and Administration*, 86 BROOK. L. REV. 791, 795, 798 (2021).

use to enhance their evaluation before sentencing.⁴³

C. *AI in the Executive*

Finally, the use of AI in the executive branch will be enormous and critical considering the number and variety of missions and responsibilities that departments' (ministries and agencies) administrations have. Administrative agencies can use AI systems to develop new rules on guidance and adjudicate, enforce, or otherwise implement statutory policies. The possibilities for governmental use of AI are vast, including the use for military purposes, which must be considered separately because of the implications it presents.⁴⁴

Looking at the United States, it can be found that federal agencies are today using AI systems gradually. Some academic studies reviewed the different uses of AI by agencies, highlighting and analyzing the most relevant examples to show the implications of its uses and provide some recommendations.⁴⁵ These studies were the only way to know how US agencies used AI as there were no official records or reports on AI uses in federal agencies until Executive Order 13960. Since 2021, agencies have been required to create an inventory of AI usage.⁴⁶ The problem of fragmentation in the use of AI is exacerbated by the US federalist structure. This structure means national and local agencies can incorporate AI independently.⁴⁷ It also shows that the application of AI in the US government is taking place without any determined plan at the global level and, above all, without a common legal framework or control over its deployment in the public sector.

43. See the cases at the state court level (Wisconsin, Indiana, Kansas) that support the use of AI system in courts but recognize the right to access to the report and to the algorithm; *see id.* at 807–13.

44. See the references on AI military use in Coglianese & Ben-Dor, *supra* note 42, at 792 n.4 (2021).

45. A very useful tool in a first approach is the 2020 Stanford University Report prepared for the ACUS on the “Use of AI in Federal Administrative Agencies” that offers a broad picture of government use of AI. *See* DAVID FREEMAN ENGSTROM ET AL., GOVERNMENT BY ALGORITHM: ARTIFICIAL INTELLIGENCE IN FEDERAL ADMINISTRATIVE AGENCIES (2020); *see also* Coglianese & Ben-Dor, *supra* note 42, at 791–96.

46. *See* Exec. Order No. 13960, *supra* note 13, § 5; *see also* DEPARTMENT OF HEALTH AND HUMAN SERVICES, *Artificial Intelligence Use Cases Inventory*, <https://www.hhs.gov/about/agencies/asa/ocio/ai/use-cases/index.html> (last visited Jan. 14, 2023); THE DEPARTMENT OF ENERGY, *Agency Inventory of AI Use Cases*, https://www.energy.gov/sites/default/files/2022-07/DOE_Agency_Inventory_of_AI_Use_Cases.pdf; THE DEPARTMENT OF AGRICULTURE, *Inventory of USDA Artificial Intelligence Use Cases*, https://www.usda.gov/data/AI_Inventory.

47. Coglianese & Ben-Dor, *supra* note 42, at 793.

While the use of AI in US federal agencies is very limited at present,⁴⁸ there are examples of its usage in the full range of governance tasks to aid human decision-making.⁴⁹ In particular, there are cases of AI usage in agency policymaking as a tool for regulatory research, analysis, monitoring, and collecting or processing information.⁵⁰ Additionally, AI systems for enforcing regulatory mandates are used to identify or prioritize targets of agency enforcement action.⁵¹ AI is also used in adjudicating benefits and rights performing tasks that support formal or informal agency adjudication.⁵² AI systems usage is expanding in public service provision—it identifies needs and facilitates communication with citizens.⁵³ Finally, AI is largely used in internal management to support agency management of resources. This management includes human resource management, public procurement, and the maintenance of technology systems.⁵⁴

In the case of the EU, it should be noted that the deployment of AI in public administration is an internal matter for each member state as the union has no direct competence in this specific area. Although the EU can regulate AI in general and promote its use at a national level, it

48. ENGSTROM ET AL., *supra* note 45, at 88 (finding only 157 cases in 64 US Federal agencies, and only 20 cases could be considered of higher level of sophistication).

49. According to some studies, the US has not yet instituted an AI system providing for total decision-making by algorithm, leaving the human “out of the loop” in the decision. However, it is not clear the role of AI in the final decision, activity, or service provided by the agencies. Coglianese & Ben-Dor, *supra* note 42, at 795.

50. This is the case of the Consumer Financial Protection Bureau AI system for analysis of consumer complaints; the Bureau of Labor Statistics coding of worker injury narratives; and the Food and Drug Administration analysis of adverse drug events. ENGSTROM ET AL., *supra* note 45, at 53–58, 59–64.

51. Some examples are the Securities and Exchange Commission, Centers for Medicare and Medicaid Services, and Internal Revenue Service predictive enforcement tools; also, the Customs and Border Protection and Transportation Security Administration facial recognition systems; and finally, the Food Safety and Inspection Service prediction to inform food safety site testing. *See* ENGSTROM ET AL., *supra* note 45, at 30–37.

52. Such as the Social Security Administration system for correcting adjudicatory errors or the US Patent and Trademark Office tools for adjudicating patent and trademark application. ENGSTROM ET AL., *supra* note 45, at 37–45, 46–52.

53. This is the area in which AI expansion is most likely to take place performing tasks that support the direct provision of public services to the citizens or facilitate communication with the public for regulatory or other purposes. There are several examples as the US Postal Service autonomous vehicles project and handwriting recognition tool, the Department of Housing and Urban Development and US Citizenship and Immigration Services chatbots or the Agencies analysis of submitted rulemaking comments. ENGSTROM ET AL., *supra* note 45, at 59–64, 65–69.

54. Among the examples are the Department of Health and Human Services tool to assist procurement decision-making; the General Services Administration tool to ensure legal compliance of federal solicitations; and the Department of Homeland Security tool to counter cyberattacks on agency systems. ENGSTROM ET AL., *supra* note 45, at 30–36.

cannot impose a generic AI model for the governments of all member states.

EU countries are gradually including AI systems in government, so there is an increasing number of cases of AI use by national public administrations. The European Commission released in 2022 a report on “Artificial Intelligence in Public Services”⁵⁵ that offers a complete overview of its use and impact in member states. The report found 686 user cases of AI in twenty-seven member states, with the cases increasing each year in a very fragmented and unevenly distributed way reaching all government functions.⁵⁶

Member states are using AI systems to provide public services and engagement (service personalization, engagement management, service integration, and data sharing management); enforcement (smart recognition processes, predictive enforcement processes, supporting enforcement processes, management of auditing and lodging); analysis, monitoring, and regulatory research (prediction and planning, information analysis processes, and monitoring policy implementation); internal management (internal support and primary processes); and also for adjudicating (deciding on benefits).⁵⁷

Although the use of AI is still very limited in the EU considering the size and variety of government actions of member states, it is increasingly expanding to new areas, and it has already taken part in critical activities. In fact, the use of AI in government led to the resignation of the Dutch Prime Minister in 2021 after thousands of families were wrongly accused of fraud due to a biased algorithm.⁵⁸ In Europe, AI systems take part in a wide range of public services (in

55. In addition to the overview, the report analyzes the challenges, barriers, and risks of the use of AI in the public sector and provides policy recommendations in its adoption and implementation. See *Joint Research Centre Science for Policy Report, AI Watch: European Landscape on the Use of Artificial Intelligence by the Public Sector*, EUR 31088 EN (2022), https://joinup.ec.europa.eu/sites/default/files/inline-files/JRC129301_01-1.pdf.

56. The number of cases is increasing each year (from 5 in 2015 to 167 in 2021) and unevenly distributed— Netherlands (123), Italy (75) and Portugal (60). Most of them are case of use of AI at national level (54%), based in machine learning (58%) and for provision of public services and engagement (36%). For an overview of cases, see *id.* at 35–45.

57. For providing public services and engagement (36%), enforcement (26%), analysis, monitoring and regulatory research (22%); internal management (16%); and adjudicating (2%). *Id.* at 41.

58. Thomas Erdbrink, *Government in Netherlands Resigns After Benefit Scandal*, N.Y. TIMES (Jan. 1, 2021), <https://www.nytimes.com/2021/01/15/world/europe/dutch-government-resignation-rutte-netherlands.html>; see also Gabriel Geiger, *How a Discriminatory Algorithm Wrongly Accused Thousands of Families of Fraud*, VICE (Mar. 1, 2021), <https://www.vice.com/en/article/jgq35d/how-a-discriminatory-algorithm-wrongly-accused-thousands-of-families-of-fraud>.

particular healthcare).⁵⁹ They will likely penetrate the public sector through the delivery of services and then will likely spread to legal decision-making (rulemaking, enforcement, and adjudication).

V. GOVERNMENT USE OF AI REGULATORY FRAMEWORK

AI is spreading in the public sector in a very fragmented and unsystematic manner so far as agencies are embedding AI systems in specific functions without a common plan or a complete regulation that guarantees their use in government. However, the use of AI is not beyond the law as it is classified under existing regulations (general and specific). These regulations are already applied to AI, so it is now necessary to determine what the government use of AI regulatory framework is both in the United States and the European countries that are engaged in this AI government usage revolution.

A. Government Use of AI Regulation in the United States

In the United States, there is no comprehensive federal legislation to date on AI as a whole. Although the United States has passed legislation both on AI and AI use in government (see Section III), these are very limited pieces.

During the Trump Administration, the approach to AI had been to focus on promoting and funding research development to ensure US leadership in this area. The National AI R&D Strategic Plan, released in 2016 and updated in 2019, establishes a set of strategic priorities for funded AI research,⁶⁰ including ensuring the safety and security of AI systems. Furthermore, the National AI R&D Strategic Plan does ask and propose AI regulation to be made a priority.

The National AI Initiative Act passed in 2020 continues on the same

59. AI systems are already used in healthcare to design vaccination policies and to support emergency management. AI is also used in prevention (e.g., to predict future risk to suicidal ideation from social media data), diagnosis (e.g., voice-based diagnosis of covid) and treatment (e.g., personalized cancer care). For more information, see *Panel for the Future of Science and Technology, Artificial Intelligence in Healthcare: Applications, Risks, and Ethical and Societal Impacts*, EUR. PARL. RSCH. SERV. 3 (PE 729.512) (June 2022).

60. Strategy 1: Make long-term investments in AI research; Strategy 2: Develop effective methods for human-AI collaboration; Strategy 3: Understand and address the ethical, legal, and societal implications of AI; Strategy 4: Ensure the safety and security of AI systems; Strategy 5: Develop shared public datasets and environments for AI training and testing; Strategy 6: Measure and evaluate AI technologies through standards and benchmarks; Strategy 7: Better understand the national AI R&D workforce needs; Strategy 8: Expand public-private partnerships to accelerate advances in AI.

path, as it is limited to ensuring US leadership in AI research and development by providing a set of initiative activities to be carried out by the president acting through the National Artificial Intelligence Initiative Office and the Interagency Committee. Far from proposing a specific regulation for AI, the AI Initiative Act supports the development of private instruments for the development and use of AI, such as voluntary standards, best practices, and benchmarks, including the development of a voluntary risk management framework for the trustworthiness of AI systems.⁶¹

Executive Order 13859, *Maintaining American Leadership in AI*, approved in 2019, expresses the negative approach to the regulation of AI. It also promotes and protects US advancements in AI. One of the strategic objectives is to reduce barriers to the use of AI technologies, which promotes their innovative application while protecting American technology, economic security, national security, civil liberties, privacy, and values.

In the same vein, the Office of Management and Budget (OMB) Memorandum on Guidance for Regulation of AI Applications released in 2020 sets out policy considerations that should guide the approaches to AI applications developed and deployed outside of the federal government.⁶² Following the negative approach, the OMB Memorandum considers that AI applications “do not necessarily raise novel issues” and they can be promoted “through forbearing from new regulation” that should be only considered after deciding “that it is necessary.”⁶³ The OMB Memorandum settles ten principles for the stewardship of AI applications that are a reproduction of the common principles of rulemaking⁶⁴—without including any specific principles to face AI challenges—and prefers the use of nonregulatory approaches to AI⁶⁵ while promoting the reduction barriers to the deployment and use of

61. These AI activities are under the responsibility of the National Institute of Standards and Technology according to Title III of the National Artificial Intelligence Initiative, H.R. 6216, 116th Cong. §§ 101, 301(a)–(e) (2020).

62. OFF. OF MGMT. & BUDGET, EXEC OFF. OF THE PRESIDENT, MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES: GUIDANCE FOR REGULATION OF ARTIFICIAL INTELLIGENCE APPLICATIONS (2020), <https://www.whitehouse.gov/wp-content/uploads/2020/11/M-21-06.pdf>.

63. *See id.* at 3.

64. The principles are public trust in AI (responding and mitigating risks), public participation (informing the public and promoting voluntary frameworks and standards), scientific integrity and information quality, risk assessment and management, benefit and cost, flexibility, fairness and non-discrimination, disclosure and transparency, safety and security, and interagency coordination. *See id.*, at 3–7.

65. The non-regulatory approaches include sector-specific policy guidance or frameworks, pilot programs and experiments, voluntary consensus standards, and voluntary frameworks. *Id.* at 7–8.

AI.⁶⁶

The Biden Administration's approach to AI is more protective and citizen based. The White House Office of Science and Technology Policy (OSTP) released a blueprint in 2022 for an AI Bill of Rights that included a set of five principles and associated practices that will help guide the design, use, and deployment of AI systems to protect the rights of the citizens: (a) safe and effective systems; (b) algorithmic discrimination protections; (c) data privacy; (d) notice and explanation; (e) human alternatives, consideration, and fallback.⁶⁷

Government use of AI has been specifically considered in the United States providing some measures to promote it within federal agencies. The 2020 Government Act authorized the AI Center of Excellence within the General Services Administration to facilitate and improve the use of AI in federal government. Even more relevant is Executive Order 13960, Promoting the Use of Trustworthy AI in the Federal Government (December 3, 2020), which sets the following principles for the use of AI in federal government: (a) lawful and respectful of our nation's values; (b) purposeful and performance-driven; (c) accurate, reliable, and effective; (d) safe, secure, and resilient; (e) understandable; (f) responsible and traceable; (g) regularly monitored; (h) transparent; and (i) accountable.

These principles are referred to as the main problems that arise with the use of AI in government and show that there is increasing concern about the implication of AI use in government. This concern is the basis of agency guidelines for deploying AI tools adopted by the US Administrative Conference. The guidelines ask agencies to consider issues such as transparency, technical capacity bias, procurement, privacy, security, decisional authority, and oversight.⁶⁸ The Government Accountability Office has also issued an accountability framework identifying key practices to ensure accountability and responsible AI use by federal agencies.⁶⁹

66. Through access to Federal data and models for AI R&D; Communication to the public; Agency Participation in the Development and Use of Voluntary Consensus Standards and Conformity Assessment Activities; and International Regulatory Cooperation. *Id.* at 8.

67. WHITE HOUSE OFF. OF SCI. AND TECH. POL'Y, BLUEPRINT FOR AN AI BILL OF RIGHTS: MAKING AUTOMATED SYSTEMS WORK FOR THE AMERICAN PEOPLE 13 (Oct. 2022), <https://www.whitehouse.gov/ostp/ai-bill-of-rights/>.

68. ADMINISTRATIVE CONFERENCE OF THE UNITED STATES, ADMINISTRATIVE CONFERENCE STATEMENT #20 AGENCY USE OF ARTIFICIAL INTELLIGENCE 2–10 (Dec. 2020), <https://www.acus.gov/sites/default/files/documents/Statement%2020%20Agency%20Use%20of%20Artificial%20Intelligence.pdf>.

69. U.S. GOV'T ACCOUNTABILITY OFF., GAO-21-519SP, ARTIFICIAL INTELLIGENCE: AN ACCOUNTABILITY FRAMEWORK FOR FEDERAL AGENCIES AND OTHER ENTITIES (2021).

B. Government Use of AI Regulation in the EU

In the EU, there is also no specific legislation on AI to date, although there are very relevant proposals going on. According to the strategy included in the White Paper on AI (2020) and the Communication Fostering a European Approach to AI (2021), the commission launched a proposal for a regulation laying down harmonized rules on AI in the EU (AI Act) in April 2021.⁷⁰ This regulation was completed in September 2022 with the proposal for a directive on adapting noncontractual civil liability rules to artificial intelligence (AI Liability Directive).⁷¹

The AI Act will presumably be adopted by the end of 2023 and will introduce a harmonized regulation that will be applicable to AI systems used both in the private and the public sector. However, it is not an extensive and detailed regulation on AI, but rather a minimal regulation that includes the prohibitions of certain AI practices, specific requirements and obligations for high-risk AI systems, and transparency rules for AI systems intended to interact with people.

For high-risk AI systems—that include most of the AI systems used in government—they will have to observe legal requirements in relation to data and data governance, documentation and recording keeping, transparency and provision of information to users, human oversight, robustness, accuracy, and security. The high-risk AI systems will have to pass a conformity assessment procedure controlled by independent third-parties or notified bodies.

This specific legislation on AI is completed by several soft law instruments that set out substantive expectations but are not directly enforceable by government. The main instrument is the Ethics Guidelines and Assessment List for Trustworthy AI, developed by a High-Level Expert Group on AI in 2018, that is the only legal specific framework to deal with AI systems in the EU today.⁷² The international standards, such as the ISO or the IEEE standards,⁷³ also have a

70. *Proposal for a Regulation of the European Parliament and of the Council Concerning Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts*, COM (2021) 206 final (Apr. 21, 2021).

71. *Proposal for a Directive of the European Parliament and of the Council on Adapting Non-Contractual Civil Liability Rules to Artificial Intelligence (AI Liability Directive)*, COM (2022) 496 final (Sept. 28, 2022).

72. High-Level Expert Group on AI, *Ethics Guidelines for Trustworthy AI* (June 2018). On the role of ethic in AI, see Jessica Morley et al., *Ethics as a Service: A Pragmatic Operationalisation of AI Ethics*, 31 MINDS MACH 239 (2021).

73. For example, the ISO/IEC TS 4213: ASSESSMENT OF MACHINE LEARNING CLASSIFICATION PERFORMANCE; ISO/IEC CD 5259: DATA QUALITY FOR ANALYTICS AND

relevant advisory role as they provide a technical reference to the design of the AI system. There are also digital rights charts (such as the European and Spanish charts)⁷⁴ that include specific rights in the interactions with algorithms.

Beyond all this specific regulation, AI is subject to general regulation that is currently in effect and this includes the regulation on data (data protection, open data, data governance),⁷⁵ digital services,⁷⁶ cybersecurity,⁷⁷ product safety or consumer protection,⁷⁸ and, of course, fundamental rights.⁷⁹ Therefore, there is currently an extensive legal framework for AI, albeit a specific one.

Despite all the regulation that applies to AI in Europe, there is no specific regulation on the use of AI in government as the EU has no competence in this specific field. Member states are regulating government use of AI on a national basis, which means the regulation is highly fragmented and underdeveloped.

MACHINE LEARNING (ML); ISO/IEC DIS 5338: AI SYSTEM LIFE CYCLE PROCESSES; ISO/IEC CD 5339 GUIDELINES FOR AI APPLICATIONS; ISO/IEC CD 5392: REFERENCE ARCHITECTURE OF KNOWLEDGE ENGINEERING.

74. *Communication from the Commission Establishing a European Declaration on Digital Rights and Principles for the Digital Decade*, at 1, COM (2022) 28 final (Jan. 26, 2022); Spanish Charter of Digital Rights art. 24, July 2021.

75. Regulation (EU) 2016/679, on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation) 2016 O.J. (L 119) 17; Council Directive 2019/1024, on Open Data and the Re-Use of Public Sector Information, 2019 O.J. (L 172) 74 (EU); Regulation (EU) 2022/868 on European Data Governance and Amending Regulation (EU) 2018/1724 (Data Governance Act) 2022 O.J. (L 152) 1; *IoT Data: Proposal for a Regulation on Harmonised Rules on Fair Access to and Use of Data (Data Act)*, at 18, COM (2022) 68 final (Feb. 23, 2022).

76. Council Directive 2000/31, on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market ('Directive on Electronic Commerce'), 2000 O.J. (L 178) 17 (EC); *Proposal for a Regulation on a Single Market for Digital Services (Digital Services Act)*, at 1, COM (2020) 925 final (Dec. 15, 2020); *Proposal for a Proposal for a Regulation on Contestable and Fair Markets in the Digital Sector (Digital Markets Act)*, at 1, COM (2020) 842 final (Dec. 15, 2020).

77. Council Directive 2000/31, on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market ('Directive on Electronic Commerce'), 2000 O.J. (L 178) 17 (EC); *Proposal for a Regulation on a Single Market for Digital Services (Digital Services Act)*, at 1, COM (2020) 925 final (Dec. 15, 2020); *Proposal for a Proposal for a Regulation on Contestable and Fair Markets in the Digital Sector (Digital Markets Act)*, at 1, COM (2020) 842 final (Dec. 15, 2020).

78. Council Directive 85/374 on the Approximation of the Laws, Regulations and Administrative Provisions of the Member States Concerning Liability for Defective Products, 1985 O.J. (210) 32 (EC); Council Directive 2006/42/EC on Machinery, and Amending Directive 95/16/EC (recast), 2006 O.J. (157) 14.

79. Fundamental rights beyond those included in Member States' constitutions can be found in Charter of Fundamental Rights of the EU, Oct. 26, 2012, 2012 O.J. (C 326) 395; European Convention on Human Rights § 1 art. 2.

In the case of Spain, for example, there used to be a single article, article 41 in Act 40/2015, that regulated the use of AI in government and only required the identification of the competent body or bodies for the definition of specifications, programming, maintenance, supervision, and quality control.⁸⁰ Recently, a new article, article 23 in Act 15/2022, introduces new specific requirements for the use of AI in government decision-making (minimization of bias, transparency and accountability, applying impact assessment, and a quality seal for algorithms) but these are not compulsory for public administration.⁸¹

VI. RISK AND PERILS OF AN ARTIFICIALLY INTELLIGENT GOVERNMENT

There is serious concern about the expanding use of AI, which has led to the development of a growing body of regulation and soft law instruments, both in the US and the EU. However, no particular attention has been paid to the implications of the use of AI by government. In spite of this lack of attention, singular problems arise that are challenging constitutional and administrative principles, and they require specific principles and regulations.

These singular problems arise with particular complexity when AI is used in government decisions involving the use of power and affecting the public's rights, such as rulemaking (e.g., regulatory analysis), adjudication (e.g., grants, aids) or enforcement (inspection). On the other hand, internal management (e.g., application form managers), public engagement (e.g., chatbots), monitoring (e.g., analysis of adverse drug events), and public service provision (e.g., personalized diabetes care) are government tasks that are similar in nature to the use of AI in the public sector. Therefore, they can be sufficiently covered by general AI regulations and soft law instruments requiring human agency and oversight, transparency, safety, privacy, nondiscrimination, or accountability. Nevertheless, all these principles, although relevant, may not be enough for government decision-making. Use of AI in this area needs administrative and constitutional principles.

80. On Legal Regime of the Public Sector Act 40/2015 art. 41, B.O.E. 2015, 236 (Spain); see Julián Valero Torrijos, *The Legal Guarantees of Artificial Intelligence in Administrative Activity: Reflections and Contributions from the Viewpoint of Spanish Administrative Law and Good Administration Requirements*, 1 (1-2) EUR. REV. OF DIGIT. ADMIN. & L. – ERDAL, 56–57 (2020); see also Itziar Sobrino-García, *Artificial Intelligence Risks and Challenges in the Spanish Public Administration: An Exploratory Analysis through Expert Judgements*, 11 ADMIN. SCI. 102 (2021).

81. Comprehensive Law 15/2022 art. 23 (B.O.E. 2022, 167) (Spain).

A. Human Factor Inside and Outside AI Decision-Making

Regarding the use of AI in government decisions that involve the use of power, the first question that arises is whether AI systems can replace public officials or authorities in the decision-making processes, or will it be used as a tool that aids such processes. One of the requirements of a trustworthy AI is the idea of human agency and human oversight,⁸² but governments can adopt automated decisions and use AI systems without a human-in-command as long as they are covered by national legislations. Neither the US nor the EU have explicitly excluded the use of AI systems in administrative agency decisions, but some European countries have banned or make the use of AI systems more difficult when exercising authority discretion.⁸³

Although it has not yet been instituted in government, AI systems that provide for total decision-making by algorithm (that is, human “out of the loop” decisions),⁸⁴ it is not clear when computers are making a fully independent determination or when they can be merely supportive formally but determinative in fact.⁸⁵ It is important to clarify the role that AI systems can assume, and establish a rule indicating in which

82. Regulation (EU) 2016/679, art. 26, General Data Protection Regulation, 2019 O.J. (L 151) 2 (explaining that human agency includes the right not to be subject to a decision based solely on automated processing when this produces legal effects on users or similarly significantly affects them—included in article 26 of GDPR—and human oversight based on the human-in-command (HIC) approach that allow to decide when and how to use the system in any particular situation including levels of human discretion during the use of the system and the ability to override a decision made by a system); see *Ethics Guidelines for Trustworthy AI*, at 16 (2018).

83. In the US and the EU, AI in government regulation implicitly admit the use of human independent AI system. In the US there is no right to a human in the administrative decision-making process. See Francesca Bigami, *Artificial Intelligence Accountability of Public Administration*, 12 AM. J. COMP. L. (2022). In Germany, fully automated administrative acts are covered by VwVfG § 35a, but it excludes the use of automated systems for administrative acts wherever these require the use of discretion. See Elena Buoso, *Fully Automated Administrative Acts in the German Legal System*, 1 EUR. REV. OF DIGIT. ADMIN. & L. 113, 114 (2020). In Spain, article 43 of Act 40/2015 refers to automated decision, but the Section XVI of the Charter of Digital Rights requires that discretionary decision-making is reserved to persons, unless a specific law allows for the adoption of automated decisions in that particular area. See On Legal Regime of the Public Sector Act, *supra* note 80.

84. See Coglianese & Ben-Dor, *supra* note 37 (noting that in the EU, it is not possible to confirm that any administrative body has instituted an independent AI system).

85. See Cary Coglianese & David Lehr, *Transparency and Algorithmic Governance*, 71 ADMIN. L. REV. 1, 31 (2019); Cary Coglianese & David Lehr, *supra* note 30, at 1167–70 (exploring the difference between supportive and determinative algorithms); see also Lilian Mitrou et al., *Human Control and Discretion in AI-Driven Decision-Making in Government*, ICEGOV ‘21: PROCEEDINGS OF THE 14TH INTERNATIONAL CONFERENCE ON THEORY AND PRACTICE OF ELECTRONIC GOVERNANCE 10 (2021).

cases they can act independently of humans, since these systems may outsource government decisions without a constitutional or even a legal reform.⁸⁶

B. Problems with Transparency

A second challenge is reconciling public law's commitment to public participation and reason giving as there is a lack of transparency as well as a need to explain black box AI systems in advance. Citizens should participate in the design of AI algorithms as long as they affect their rights. They must receive an explanation about AI decisions and have access to the merits of decisions, especially if they appeal, and it should be in natural language (and not in machine code). This AI decision-making would not be a problem if AI systems were always supportive and if the final decisions were adopted by humans, but as noted before, the reality is that government decisions are increasingly relying on the result of an algorithm.⁸⁷

Transparency is a basic principle in the use of AI in government. It has a broader scope than AI transparency in the private sector because it goes from the design of the public algorithm to the adoption and supervision of algorithmic decision-making.⁸⁸

On one hand, government use of AI should include public participation in algorithm design in the same way that the notice and comments process allow citizens to participate in rulemaking.⁸⁹

86. Despite the use of human-independent AI is not banned in the US nor the EU it is clear that "right to a human decision," is one of the fundamental assumptions in legal systems. Aziz Z. Huq, *A Right to a Human Decision*, 106 VA. L. REV. 611, 615–20 (2020); see also CARY COGLIANESE, A FRAMEWORK FOR GOVERNMENTAL USE OF MACHINE LEARNING 51–52 (2020) (report to the Admin. Conf. of the US).

87. See ENGSTROM ET AL, *supra* note 45, at 15–20.

88. In the US, Executive Order 13960, *supra* note 13, § 3, includes among the principles of AI use in government that: AI should be sufficiently understandable by experts, users, and others; human users have a role and responsibility in documenting all the process of use of AI; AI performance should be regularly monitored and supervised; and there should be transparency and frequent disclosure of relevant information regarding the use of AI. The OMB MEMORANDUM M-21-06 (2020), *supra* note 62, ¶ 8, provides further guidance on transparency. In the EU, there are no specific principles for the use of AI in government but the Ethics Guidelines for Trustworthy AI prepared by the High-Level Expert Group refers to transparency in general which includes: traceability (data sets and the processes should be documented); explainability (technical processes of an AI systems should be understood and traced by human beings); and communication (AI systems should be perceived as such by humans to users). High-Level Expert Group on AI, *supra* note 72.

89. OFF. MGMT. & BUDGET, *supra* note 62, at 3. On participation in algorithm design, see Francesca Bigami, *supra* note 83.

According to some opinions, AI algorithms should be considered rules and should be submitted to a political notice and comments rulemaking process.⁹⁰

On the other hand, transparency includes the disclosure of information on algorithm design and performance as well as on the datasets and the training process. This disclosure requires that these processes be traceable and should include access to all information, making them sufficiently understandable for citizens. The problem is that it can be impossible to fulfill these requirements (traceability, access, intelligibility) for black box AI systems. Therefore, it has to be considered if using this kind of algorithm is compatible with constitutional processes and administrative procedure rights.

Beyond these problems with black box AI and in the case of common algorithms, further barriers for the transparency of AI government decisions remain such as copyright, privacy, national security, and other protected information can deny access to algorithm information.⁹¹ There is no binary solution to these transparency problems, but to begin with,

90. See ENGSTROM ET AL, *supra* note 45, at 77, 84 (discussing asking for notice-and-comment rulemaking for AI algorithms); see also David Freeman Engstrom & Daniel E. Ho, *Algorithmic Accountability in the Administrative State*, 37 YALE J. REGUL., 800, 836–39 (2020); Administrative Conference Statement #20: Agency Use of Artificial Intelligence, 86 Fed. Reg. 6616, 6618 (2020); Andrés Boix Palop, *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*, 1 EUR. REV. DIGIT. ADMIN. & L., 75 (2020) (providing a similar idea from a European perspective); Francesca Bigami, *Artificial Intelligence Accountability of Public Administration*, 12 AM. J. COMP. L., 1, 21, 23 (2022) (discussing the blurring difference between rules and adjudication in using AI).

91. In the US, the main concern of court challenges of government AI decision has been transparency, not equal protection nor privacy. Aziz Z. Huq, *Constitutional Rights in the Machine-Learning State*, 105 CORNELL L. REV. 1875, 1879, 1903 (2020). Within the EU, France's Constitutional Court, in its decision of April 3, 2020, denied access to the code of the Parcoursup algorithm that assesses the applications higher education, alleging that limitation was justified by general interest and was not disproportionate. See Lucie Cluzel-Métayer, *The Judicial Review of the Automated Administrative Act*, 1 EUR. REV. DIGIT. ADMIN. & L., 101, 101–03 (2020). In the Netherlands, the Hague District Court decision of February 5, 2020, about the SyRi algorithm (program to fight tax fraud) also prevents the judge from controlling the algorithm. In Spain, the first case regarding government use of AI of 2022 also denies the access to the code. See Juli Ponce Solé, *The Energy Social Bonus and the Bosco Program: About Algorithms, Bugs and Source Code. Regarding The First Court Decision Handed Down in 2021: A Bad Judgment That We Hope Will be Corrected Soon*, LUMSA UNIVERSITÀ (Sept. 29, 2022, 3:34 PM), <https://betterregulation.lumsa.it/repost-rednmr-energy-social-bonus-and-bosco-program-about-algorithms-bugs-and-source-code-regarding>. For a similar discussion related to Italy, see Flavio Bravo, *Access to Source Code of Proprietary Software Used by Public Administrations for Automated Decision-Making: What Proportional Balancing of Interests?*, 1 EUR. REV. DIGIT. ADMIN. & L., 157 (2020).

it will have to be taken into account the context in which AI is used in government and the characteristics of the AI system.⁹²

C. Gaming and Controlling AI Algorithms

Another challenge of AI use in government related to transparency is the risk of gaming with algorithms without manipulating them.⁹³ A full transparency of AI government systems can lead to a total disclosure of the public algorithms letting stakeholders look inside the government's brain. So, transparency allows large stakeholders to invest in the right technology, which will anticipate and control administrative algorithm-based decisions, and in doing so, dominate government's decision criteria.

This side effect of transparency can be admitted in some cases (for example adjudication of benefits), so the algorithm should be made public with no particular concern. In other cases (such as tax inspection),⁹⁴ the algorithm must be kept hidden to avoid giving advantages for government actions. But even in these cases there is an actual risk of "adversarial learning" as the government criteria can be identified and handled through reverse engineering that shows the decision model.

D. AI Providers Dependence

Another challenge for government AI is the dependence on technology providers. Creating AI systems within government might yield better tailored tools and generate internal capabilities to better handle the system, while obtaining AI systems from external sources might allow access sooner to more sophisticated tools and save some associated costs.⁹⁵

In fact, it is likely that most of the AI systems used in government

92. Administrative Conference Statement #20, *supra* note 90, at 6616; *see also* Coglianese & Lehr, *supra* note 85, at 2 n.2; Agustí Cerrillo I. Martínez, *How Can We Open the Black Box of Public Administration? Transparency and Accountability in the Use of Algorithms*, 58 REVISTA CATALANA DE DRET PUBLIC, 13 (2021) (discussing AI government transparency).

93. This has been a collateral problem, noted in Administrative Conference Statement #20, *supra* note 90, at 6616; *see also* ENGSTROM ET AL., *supra* note 45, at 86–87.

94. *See* Elise Degreve, *The Use of Secret Algorithms to Combat Social Fraud in Belgium*, 1 EUR. REV. DIGIT. ADMIN. & L., 167 (2020).

95. *See* Administrative Conference Statement #20, *supra* note 90, at 6617.

will come from private companies.⁹⁶ They produce systems that are purchased and are also hired to design these systems for administrative bodies. The peculiar nature of AI systems and the role that they play in administrative decision-making leads to a kind of outsourcing for government functions.⁹⁷ Private companies create programs that can even replace government decision-making, and public bodies totally depend on these companies to make their decisions, so administrative decisions are actually taken outside government.

In this situation, public procurement will turn into a key tool not only to get better AI systems, but also to regulate the use and operation of AI systems in government. The terms and conditions in the procurement processes will have to have imbedded general AI regulations and this process will make up for the lack of AI use in government regulation.

E. AI Accountability and Oversight

The last and more relevant challenge is AI government accountability and oversight.⁹⁸ Internal oversight within agencies and public bodies allows proper use and functioning of the AI system, and external oversight ensures that government AI systems are lawful and respectful with constitutional values.

The most relevant external oversight instrument that guarantees that government use of AI is under the rule of law is judicial review. Courts may be overwhelmed by government AI for several reasons: lack of expertise on technical implications of AI systems, inaccessibility of algorithm and dataset information, unintelligibility of this information, or inability to explain the result. These are old problems in a new context that make them more serious as the AI system challenges the basic principles of administrative and constitutional law.⁹⁹

Furthermore, if AI systems without humans in command are widespread in government, there is no human in control for providing reasons, and these AI systems are increasingly complex or, directly, cannot give explanations for their decisions, it will be impossible for

96. In the US, it seems that most of the Federal AI systems (53%) are the product of in-house efforts by agencies. ENGSTROM ET AL., *supra* note 45 at 7. Nevertheless, AI systems will be outsourced as long as the turn more complex.

97. *Id.* at 88–90.

98. See Administrative Conference Statement #20, *supra* note 90. See also David Freeman Engstrom & Daniel E. Ho, *Algorithmic Accountability in the Administrative State*, 37 YALE J. REGUL., 800 (2020).

99. ENGSTROM, ET AL., *supra* note 45, at 75–78. See also Rebecca Williams, *Rethinking Administrative Law for Algorithmic Decision Making*, 42 OXFORD J. LEGAL STUD., 468 (2022).

courts to provide judicial review in line with traditional models.

The limitations of courts to provide a full judicial review leads to calls to explore new alternatives to a government AI systems oversight beyond the courts' scope, including *ex ante* mechanisms (such as precertification); AI oversight boards (both within and outside public bodies); soft law rules (such as technical standardization or ethics guidelines); risk and impact assessment; and so on.

There are many other challenges regarding the use of AI in government, such as harmful biases, data privacy, and security.¹⁰⁰ These are challenges that are common to AI use both in the private and public sectors, so they do not defy existing administrative and constitutional principles. Although these challenges to AI use are relevant when projected in the public sector, they can be magnified and exacerbated as well as generate problems of discrimination and violation of privacy or insecurity as never known before. Therefore, they will require special attention.

VII. CONCLUSION

The use of AI in government is posing new challenges that go beyond the usual problems of digitalization (such as technical infrastructure, human capital, and regulatory barriers). The unique characteristics of this new technology are transforming the nature of government, as it is not used as a tool to facilitate its activity, but rather it affects administrative decision-making.

Indeed, AI is a technology that is not magic, but it has functionalities that were unknown until now, and they include generating outputs, such as content, predictions, recommendations, or decisions influencing the environments it interacts with. The use of predictive algorithms takes government action to a new level as it

100. In the US, EO 13690 ask for an AI in Government be accurate, reliable, effective, safe, secure, and resilient. OFF. OF MGMT. & BUDGET, *supra* note 62; *see also* Administrative Conference Statement #20, *supra* note 90, at 6617–18. In Europe, the ETHICS GUIDELINES FOR TRUSTWORTHY AI, *supra* note 72, include the following principles for AI in general: technical robustness and safety (resilience to attack and security; fallback plan and general safety; accuracy; reliability and reproducibility); privacy and data governance (privacy and data protection; quality and integrity of data; access to data); and diversity, non-discrimination and fairness (avoidance of unfair bias; accessibility and universal design; stakeholder participation). On legal issues with governmental use of AI, *see* Coglianese & Lehr, *supra* note 86. On biased government AI algorithms, *see* ENGSTROM ET AL, *supra*, note 45, at 79–81; *see also* Kristen M. Altenburger & Daniel E. Ho, *When Algorithms Import Private Bias Into Public Enforcement: The Promise and Limitations of Statistical Debiasing Solutions*, 1 J. INSTITUTIONAL & THEORETICAL ECON. (2019).

ceases to be merely “automatic” and instead is “autonomous,” becoming progressively detached from human decision.

In any case, the use of AI in government is still very limited, but it is spreading to new activities and services. It is foreseeable that it can be applied to all government functions. A number of examples of this exist both in the United States and the European Union, which demonstrates the enormous potential of using AI systems in government.

The development and expansion of AI systems in government is not accompanied by the introduction of specific regulation on the use of AI in the public sector. In the United States and the European Union, regulation of AI is emerging with a global perspective without addressing the specific problems that it raises when used in government. In fact, the incorporation of AI in government is occurring without a specific legal framework so the use of algorithms is only subject to traditional administrative law.

It is urgently needed to promote a new governance for the use of algorithmic AI by administrative bodies to meet the challenges it will pose for government. A first step is to identify what AI consists of and how it is being applied (and can be applied) in government functions. From there, it is necessary to analyze the incipient problems that are arising with respect to the role of humans in administrative AI decisions; the transparency and the possibility of accessing the reasons for AI administrative decisions; the dependence on third parties that provide external AI; and, above all, the difficulties of accountability and oversight of government AI action to ensure that it is lawful and respectful of constitutional values.

To conclude, it is clear that the use of AI in government is changing the rules of the game. A key area for public debate and academic inquiry is how to adapt existing principles of administrative and constitutional law to the new playing field. We have to be vigilant to this transformation and adopt the necessary measures in time. Otherwise, we may soon find ourselves trapped in the rationality of algorithms and missing some human arbitrariness.

