

The use of artificial intelligence in public administration

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Abstract

This paper examines the legal foundations of public sector use of artificial intelligence and identifies the main risks that this use might represent for public administration. It is also discussed the role that Administrative Law might play in avoiding or minimizing these risks. The article concludes by reflecting on the impact of artificial intelligence on the public sector and in Administrative Law.

Resumen

Este artículo examina los fundamentos jurídicos del uso de la inteligencia artificial en el sector público e identifica los principales riesgos que su uso podría representar para la administración pública. También se discute el papel que podría jugar el Derecho Administrativo para evitar o minimizar estos riesgos. El artículo concluye reflexionando sobre el impacto de la inteligencia artificial en el sector público y el Derecho Administrativo.

Résumé

Cet article examine les fondements juridiques de l'utilisation de l'intelligence artificielle par le secteur public et identifie les principaux risques que cette utilisation pourrait représenter pour l'administration publique. Le rôle que le droit administratif pourrait jouer pour éviter ou minimiser ces risques est également abordé. L'article se termine par une réflexion sur l'impact de l'intelligence artificielle dans le secteur public et le droit administratif.

Keywords: Artificial Intelligence, Public Administration, Administrative Law

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I. Introduction

Public administration is facing a process of digital transformation driven largely by the nascent adoption of artificial intelligence (AI) (Sun & Medaglia, 2019). Thus, we are witnessing progress towards a digital administration based on the intensive and innovative use of technology that facilitates government openness to citizens, the collection and analysis of data and the provision of inclusive, efficient, resilient, sustainable and people-focused services (Cerrillo i Martínez, 2021).

Today, the public sector is already using AI to analyse large volumes of data, make automated decisions and provide public services (Tangi, van Noordt, Combetto, Gattwinkel & Pignatelli, 2022). It employs natural language processing to manage form filling and to provide customer services using chatbots; it exploits image recognition to conduct biometric analyses at border controls and to prevent and prosecute crime; it even uses robots to provide care in both the health and social services sectors and autonomous vehicles for public transport. Likewise, AI is being used to simulate or forecast the effects of certain government decisions and to provide proactive, personalized public services.

The public sector is finding numerous applications for AI that can provide enhanced effectiveness, efficiency and economy and which, at the same time, can simplify procedures and promote greater proximity to citizens. However, AI is also generating several significant challenges both for the government agencies themselves and for citizens who have yet to be offered an adequate legal standing.

The domain of public administration today seeks to promote the use of artificial intelligence through, for example, the adoption of AI and digital transformation strategies; yet, at the same time, it also seeks to promote the regulation of AI. Thus, in addition to the obvious

importance that the Artificial Intelligence Act adopted by the European Parliament on 13 March last (pending official publication at the time of writing) will have, we should be aware of the need to adopt other standards to ensure the adequate regulation of its use in public administration and to provide a response to the specific challenges that the use of this technology may entail.

II. The foundations of artificial intelligence in public administration

The recently endorsed Artificial Intelligence Act offers the following definition of an AI system: that is, “a machine-based system designed to operate with varying levels of autonomy, that may exhibit adaptiveness after deployment and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments” (Article 3.1).

This definition seeks to combine different ideas that have been proposed in recent decades and to capture the diversity of technologies and scientific traditions that have been produced. In short, and for our purposes here, we should stress that, first and foremost, AI is based on the use of algorithms and data or, in the words of Lehr and Ohm, AI consists of two distinct workflows: ‘playing with the data’ and ‘the running model’ (Lehr & Ohm, 2017, p. 655). As far as algorithms are concerned, this definition highlights the varying levels of autonomy they might have, their ability to adapt and their use for generating content and making predictions, recommendations and decisions.

From the perspective of the public administration use of AI, the first concern is that of the legal nature of the algorithm. Some authors conclude that algorithms share the same defining elements as those of legal norms, so that in their elaboration the procedures established for the elaboration of general regulatory provisions need to be adhered to. Likewise, when an algorithm is approved, it should be published in accordance with the same system of openness and transparency that governs legal norms. Finally, their consideration as regulatory provisions also implies the possibility of their being controlled using the direct and indirect control mechanisms typical of regulatory standards (Boix Palop, 2020). However, other authors reach a different conclusion, considering algorithms to have a different nature to that of legal norms, their value being merely auxiliary in the application of the norm (Huergero Lora, 2020, p. 66).

A second concern to have emerged is how the algorithms used by the public sector should be designed or, where applicable, how algorithms should be incorporated into the functioning of the public administration, that is, whether their design or the uses to which they are put in public administration should be formally approved. This is an especially relevant concern, particularly if we bear in mind that the public administration does not often have the capacity to design

algorithms using their own resources and must resort to outside companies or research centres to furnish them with this technology. In response, a number of government institutions have adopted procedures to facilitate the incorporation of algorithms and, in particular, to facilitate identification of the risks that the use of AI might entail and to guarantee citizens' rights. This is exactly what the Barcelona City Council has done, for example, with the adoption of internal protocols for the definition of work methods and for the implementation of algorithmic systems.

A third concern of relevance is determining the powers that the public administration can exercise in their use of artificial intelligence. Some authors express a degree of caution at the possibility that governments might automate their exercise of discretionary powers (Ponce Solé, 2019); however, others consider that this technology can provide a qualitative gain with respect to human decision-making (Boix Palop, 2020; Huergo Lora, 2020). In all likelihood, the current stage of development of AI, the quality of data held by many government agencies and the absence of a clearly defined regulatory framework means that we should indeed be cautious and require the human supervision of all decisions made by AI systems that might represent a risk to fundamental rights or to the rule of law as provided for under the Artificial Intelligence Act. Similar measures are provided for in the Charter of Digital Rights approved by the Spanish Government in June 2021, which recognizes that the adoption of discretionary decisions be reserved to persons, unless regulations – with the force of law – provide for the adoption of automated decisions.

As regards data and, above all, public data for the development of AI (that is, in the training and supervision of algorithms) and in the automation of public administration, the “White Paper on Artificial Intelligence: a European approach to excellence and trust” states that “Without data, the development of AI and other digital applications is not possible” [COM (2020) 65 final]. This conclusion cannot be ignored and is one that is reiterated, for example, by Regulation (EU) 2023/2854 of the European Parliament and of the Council, of 13 December 2023, on harmonised rules on fair access to and use of data, which states that “High-quality and interoperable data from different domains increase competitiveness and innovation and ensure sustainable economic growth” and by Regulation (EU) 2022/868 of the European Parliament and of the Council, of 30 May 2022, on European data governance, which states that “Over the last decade, digital technologies have transformed the economy and society, affecting all sectors of activity and daily life. Data is at the centre of that transformation: data-driven innovation will bring enormous benefits to both Union citizens and the economy”.

This means the public administration must guarantee data availability. To this end, in recent years different rules have been adopted to facilitate the re-use of public administration data that can help in the design, learning and evaluation of algorithmic operations. At the European

level, mention might be made of two complementary regulations: Directive (EU) 2019/1024 of the European Parliament and of the Council, of 20 June 2019, on open data and the re-use of public sector information and Regulation (EU) 2022/868 of the European Parliament and of the Council, of 30 May 2022, on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act) (Cerrillo i Martínez, 2023).

Likewise, the public administration must promote data quality (Janssen, Brous, Estevez, Barbosa & Janowski, 2020). For example, the Artificial Intelligence Act observes that “if the AI system is not trained with high-quality data, does not meet adequate requirements in terms of its performance, its accuracy or robustness, or is not properly designed and tested before being put on the market or otherwise put into service, it may single out people in a discriminatory or otherwise incorrect or unjust manner”. To this end, the public administration are adopting data governance policies, that is, a set of principles, values and standards that guide the correct interaction between those who create, manage and preserve data, those who define their access and use, and those who access, use and re-use data in an organization, whereby each party contributes their different visions and their diversity of resources (be they strategic, archival, technological, regulatory, economic, etc.) (Cerrillo i Martínez & Casadesús de Mingo, 2021).

III. The risks of using artificial intelligence in public administration

The risks that can arise from the application of AI and which might threaten to undermine the principles of the actions of the public sector and citizens' rights cannot be ignored. In this regard, the primary hazard are potential errors or failures in the use of AI related to problems in algorithm design or in the data used, which result in flawed decision-taking or in actions that are biased or which discriminate.

Indeed, the second risk identified are precisely these biases and discriminations that may arise when the results obtained by the algorithms are not representative of the people or objects that have been subject to analysis. As Cathy O'Neil warns, algorithms can increase inequality and threaten democracy (O'Neil, 2018). Bias can be introduced consciously or unconsciously by those who design algorithms or, equally, bias might be generated from the data used in their design. To avoid or minimize this risk, the quality of the data used must be safeguarded, the design of the algorithms must be carefully appraised prior to putting them into operation, while the algorithm design and operation and the results provided must be audited.

A third risk is the absence of transparency, that is, the difficulty or impossibility of knowing how an algorithm has been designed and how it operates or of knowing the data automation process employed in obtaining a certain result (Pasquale, 2015). The opacity of the algorithms

may be attributable to various reasons: that is, technical reasons (for example, reflecting the complex, dynamic design of the algorithms or the large volume of data they use); legal reasons related to other protected assets or rights (for example, public security, intellectual property, confidentiality, the decision-making process or the protection of personal data), and organizational reasons (for example, the public administration has not formalized the decision to use an algorithm or does not have information about it). To address this risk, some governments are already proactively disseminating information via their transparency portals about the algorithms they use, their design and operation. Others – including, for example, the Barcelona City Council and the Government (the *Generalitat*) of Catalonia – are creating algorithm registries. Similarly, some public sector bodies are required to facilitate access to information about the algorithms they use upon request from an individual in exercise of their right as recognized in the legislation. Indeed, various authorities have declared their intent to guarantee the right of access to public information, including, for example, the French *Commission d'accès aux documents administratifs* (CADA) (e.g. resolution 20144578 of 8 January 2015), the Regional Administrative Court of Lazio (Italy) (ruling of 14 February 2017) and the Catalan Committee for the Guarantee of the Right of Access to Public Information (Spain) (resolutions 21 September 2016 and 200/21 June 2017). Yet, various studies warn that the exercise of this right of access to information is not in itself an adequate mechanism to shed light on the algorithms being employed (Brauneis & Goodman, 2017; Fink, 2017).

A fourth risk we might identify concerns the protection of personal data or people's privacy. As the Council of Europe states in its Declaration on the manipulative capabilities of algorithmic processes adopted on 13 February 2019, “computational means make it possible to infer intimate and detailed information about individuals from readily available data. This supports the sorting of individuals into categories, thereby reinforcing different forms of social, cultural, religious, legal and economic segregation and discrimination”. Therefore, when using AI, public administration should do so in full compliance with regulations governing the protection of personal data. To do this, they should evaluate the impact of any actions or measures based on the use of artificial intelligence on the protection of personal data. Additionally, they should ensure compliance with the principles provided for in the legislation: namely, lawfulness, fairness and transparency; limitation of purpose; data minimization; accuracy; storage limitation; integrity and confidentiality; and accountability. Ultimately, they should guarantee respect for the rights of individuals as provided for under the legislation: that is, rights of information, access, rectification, erasure, and restriction of processing.

IV. Concluding thoughts

The growing use of AI in the public sector to perform different functions and provide a range of services can result in a more effective and efficient government, simplifying procedures and promoting greater proximity to citizens. However, the potential risks concomitant with its use cannot be ignored. Some of these hazards though should be minimized following the approval of the EU's Artificial Intelligence Act; yet, we should not lose sight of the fact that some of these risks have specific manifestations when AI is used in public administration, while other risks only emerge when the public administration uses AI.

This means that, while the general regulation of AI is obviously critical, the regulation of the use of this technology in public administration needs to be addressed in order to strengthen the legal status of the individual by recognizing specific rights and powers related to transparency, participation and the guarantee of legal certainty. This need is also apparent in determining the procedure that governments should follow when incorporating AI and in identifying for what purposes and for what uses it is being adopted. Ultimately, the use of AI in public administration should be regulated to define the specific control mechanisms that apply to decisions made using artificial intelligence.

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