ARTIFICIAL INTELLIGENCE AND THE STATE FROM A COMPARATIVE PERSPECTIVE

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Abstract

The extensive literature on artificial intelligence (AI) frequently explores its relationship with state systems, a topic dense with issues touching on different areas of law and the organisation of public authorities, both from the perspective of domestic law and on a comparative level. In the context of legal comparison, there are obvious difficulties in addressing this subject, since the public policies and regulatory solutions adopted in different legal systems often appear to be similar, without actually being so. This article highlights key variables within legal systems that have a bearing on the development of AI and the theoretical construction of an 'algorithmic state'. It further demonstrates that, in addition to traditional research methods, a quantitative approach relying on global indicators and interdisciplinarity can be useful in exploring the relationship between public law and AI from a comparative perspective.

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1. Introduction

The geometrical expansion of the role of artificial intelligence (AI) is transforming legal reality, the structure of public institutions, and society, indeed the very idea of the state, which comes to be defined (from this perspective) as the "algorithmic state". This is a true revolution, marked by a shift from Information Technology (IT) to AI in just a few years.

Language is the first issue to be addressed when dealing with the relationship between the state and AI. Algorithms have a different language from that of law. This may sound obvious because the broad debate on the legal consequences of AI technologies has repeatedly laboured the point. And yet, while increasingly advanced forms of digital colonisation require us to 'submit to linguistic rules without being aware of them', there are also linguistic rules of a purely technical nature – as in the case of AI – that are 'unknown by most'[1]. Moreover, definitions in the sector are varied and do not always fully overlap[2]. If we can define the concept of 'state' within the framework of constitutional law, the same cannot be said for that of 'algorithm', a term used by legal scholars and in more recent case law, with different and sometimes conflicting meanings[3]. The same uncertainty applies to the definition of 'AI'. The quality of human 'intelligence' if applied to technology and machines is not clearly defined[4].

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[1] R. Sacco, *Il diritto muto. Neuroscienze, conoscenza tacita, valori condivisi* (2015) 7.

[2] See, for example, the EU AI Act (according to which the term 'artificial intelligence system' (AI system) means a system designed to operate with a certain level of autonomy and that, based on machine and human-provided data and inputs, infers how to achieve a given set of human-defined objectives using machine learning and logic- and knowledge-based approaches, and produces system-generated outputs such as content (generative AI systems), predictions, recommendations or decisions, influencing the environments with which the AI system interacts) and the U.S. National Artificial Intelligence Act of 2020 (where the expression 'artificial intelligence' means a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments); see also the House of Lords' Select Committee on Artificial Intelligence in the UK (according to which AI systems are technologies with the ability to perform tasks that would otherwise require human intelligence, such as visual perception, speech recognition, and language translation).

[3] See D. Baldini and M. de Benedetto, *The open texture of algorithm in legal language*, AI and Soc 1 (2024), at <https://link.springer.com/article/10.1007/s00146-024-01925>, last accessed 23 September 2024.

[4] Some definitions in A.M. Turing, *Computing Machinery and Intelligence*, LIX 236 Mind 433–460 (1950). See also S.M. McJohn, *Review of Artificial Legal Intelligence*

A second preliminary consideration seems necessary. At this early stage in the development of AI-driven algorithms, a comparative analysis relating to different legal systems is not entirely conceivable. As a result, researchers who attempt to engage in a comparative exercise such as this may only be able to provide their personal opinions on the matter. Consequently, in this case, interpreting foreign law may necessarily mean distorting it[5]. In addition, the varying degrees of development and use of AI could also affect judicial interpretation. From this perspective, it would be interesting to study the impact of new technologies on the most recent case law and to highlight any differences arising from the various intersections of AI with the legal training and mindset of judges[6].

All these problems require the selection of comparative approaches suited to macro-comparative research on the state and AI. One of the main reasons traditional comparative approaches may fail in this field is the lack of knowledge of the technical foundations on which the most advanced technologies operate and the various factors influencing the development of AI in each legal system. How could a jurist, without the support of other experts, explain the transition from IT systems to AI systems on a technical and functional level?

The inter- and multi-disciplinary nature of this paradigm shift creates substantial uncertainty, further fuelled by the frequent opacity of algorithms and the many risks involved in using this technology. To venture into a comparative analysis that goes beyond a merely descriptive and linear approach, it is desirable for legal scholars engaged in AI-related comparative research to develop a new disciplinary perspective and adopt new forms of methodological pluralism. Yet, these new directions in legal comparative analysis – and especially in numerical and empirical

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12 Harv. L. Techn. 241–248 (1998); A. Newell & H.H. Simon, *Computer science as empirical inquiry: Symbols and search*, 19(3) Common 902–915 (1976); E.L. Rissland, *Artificial Intelligence and Law: Stepping Stones to a Model of Legal Reasoning*, 99 Yale L. J. 1957–1981 (1957).

[5] See B. Fekete, *Studying Central European Laws through the Legrand Perspective: Using the Negative to Approach the Different* (Dec. 17, 2023), at <https://ssrn.com/abstract=4667018>, last accessed 23 September 2024. For this perspective, see P. Legrand, *Negative Comparative Law* (2022).

[6] See, for example, J. Frankenreiter & M.A. Livermore, *Computational Methods in Legal Analysis*, 16 Ann. Rev. L. & Soc. 39 (2020); H. Surden, *Artificial Intelligence and Law: An Overview*, 35 Ga. State U. L. Rev. 1305 (2019).

comparative law – do not always find favour with older comparativists, who may be unwilling to embrace change.

This essay is divided into two main parts. Section 2 is devoted to the most suitable methodologies for a comparative analysis of the relationship between the state and AI, emphasising comparison by difference and quantitative analysis. Section 3 examines the relationship between public structures and AI through the emergence of new relevant variables in constitutional and administrative law. Section 4 will draw some conclusions.

2. Methodological Approaches and Variables

When embarking on a comparative study, a legal scholar always wonders which methodology to use. Without entering into the debate between old and new methodological approaches, one can nevertheless observe that the interdisciplinary nature of the subject, i.e., the relationship between algorithms and public law, will necessarily have an impact on both the composition of the research team – which cannot be made up solely of lawyers – and the methodology to be followed. This conclusion is now dictated by the increasing development of science in the 21st century, the acceleration of transnational and global phenomena, and the transformation of legal thinking. But that is not all.

To better understand the perspectives and adherence to regulatory models by the states in Central and Eastern Europe, it is perhaps necessary to begin with a historical analysis. As will be seen in the next section, history is crucial to understanding the recent evolution of a form of state and government in the region. Central and Eastern Europe today is an ideal place for comparative legal research because of the variety of constitutional designs of the state, the geographical breadth of its territory, and the historically high degree of differentiation within it, as well as the heterogeneous levels of development between and within the countries belonging to the region[7].

The historical perspective is necessary to understand the contexts in which various factors have influenced the development of new technologies, below and beyond official programmes, regulations, and declarations of intent. However, such a historical

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[7] See S.P. Ramet & P. Wagner, *Post-socialist Models of Rule in Central and Southeastern Europe*, in S.P. Ramet & C.M. Hassenstab (eds), *Central and Southeast European Politics since 1989* (2nd ed., 2019) 26–56.

study should aim to understand the mindsets (*mentalités*) behind the similarities and differences between national experiences, rather than proceed in a purely descriptive and linear manner. The study of legal phenomena without taking into account their socio-historical and economic context inevitably leads to a superficial and purely positivist analysis, unable to dig beneath the surface of programmes, regulations, and declarations of intent, and is especially unable to explore the 'dark side of algorithms'. Yet, as noted above, the historical method is only one of the necessary ingredients in the methodological recipe for comparison; other methodological approaches can – and perhaps should – be used in comparative research[8]. Methodological pluralism[9] and inter- or multidisciplinary approaches[10] help to improve a researcher's understanding and could lead to a 'deep-level comparison'[11].

Space does not permit a detailed examination of the old and new methodologies available for comparative research; our focus will be on selecting the legal and extra-legal variables that may be most relevant. It must be stressed, however, that traditional comparative methodologies are increasingly becoming inadequate for comparative analysis, especially given the potential use of data science, big data, and the collaboration between experts from different disciplines[12]. Technologists are opening up new frontiers, using algorithms, data mining, and machine-learning to make it possible to examine large amounts of data and discover new models[13]. This presents a revolutionary opportunity compared to

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[8] Among others, see M. Siems, *New Directions in Comparative Law*, in M. Reimann & R. Zimmermann (eds), *The Oxford Handbook of Comparative Law* (2nd ed., 2019), 852–854; J. Husa, *Traditional Methods*, in M. Siems & P. Jen Yap (eds), *The Cambridge Handbook of Comparative Law* (2024) 15–31.

[9] See G. Midgley, J. Nicholson, R. Brennan, *Dealing with challenges to methodological pluralism: The paradigm problem, psychological resistance and cultural barriers*, 62 Ind. Mark. Man. 150 (2012); M. Oderkerk, *The Need for a Methodological Framework for Comparative Legal Research: Sense and Nonsense of 'Methodological Pluralism' in Comparative Law*, 79(3) *RabelsZ* 589 (2015); D. della Porta & M. Keating, *Approaches and Methodologies in Social Science: A Pluralist Perspective* (2008).

[10] Generally, J. Husa, *Interdisciplinary Comparative Law*: *Rubbing Shoulders with the Neighbours or Standing Alone in a Crowd* (2022).

[11] M. Siems, *Comparative Law* (3rd edn, 2022) 143–145.

[12] See A. Riles, *From Comparison to Collaboration: Experiments with a New Scholarly and Political Form*, 78 Law & Contemp. Probs. 147–183 (2015).

[13] B. Custer, *Methods of data research for law*, in V. Mak, E. Tjong Tjin Tai, A. Berle (eds), *Research Handbook in Data Science and Law* (2nd ed., Cheltenham, UK, and Northampton, MA: Edward Elgar 2018) 355–377.

the traditional practices of comparative law[14]. These approaches broaden the scope of comparative law through its intersection with other sciences and allow data and their features to be framed from non-legal perspectives[15]. From this point of view, it would be interesting to know whether such projects exist in the legal systems analysed in this special issue: their purposes, how they are financed, and what AI tools are used.

Legal and extra-legal variables are another element to be considered from a comparative perspective. Their heterogeneous presence fuels the differences between legal systems, even in the presence of common problems in the construction of AI systems and in the choice of the regulatory model to follow (the one adopted in Europe or the one adopted in other countries, such as the United States and China?).

The study of these variables needs an empirical methodology to quantify variations within the different legal systems, particularly for some legal rules. This methodology could help to assess these rules on how and to what extent AI can be developed, particularly in constitutional and administrative law. The resulting indices make it possible to correlate indicators relating to specific aspects of legal rules and institutions with the relevant variables.

From this point of view, it is possible to consider at least three sets of problems. The first concerns the technical and scientific choices underlying the indicators to be used, their origin and classification, their comparability, and their elements. A second problem concerns the search for the so-called relevant variables and their relationships, both within a legal system and in the transnational perspective. The third problem stems from the well-known limitations of so-called quantitative comparison and the use of indicators, especially for comparative public law research, and the study of the relationship between AI and states[16].

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[14] Consider Mathias Siems' analysis of new methods in legal comparison, such as 'numerical comparative law' (taking into account different types of quantitative legal information) and 'empirical comparative law' (enabling a relationship between independent and dependent variables). See M. Siems, cit. at 11, 207–285.

[15] In this regard, see A. Stazi, *'Legal Big Data': From Predictive Justice to Personalised Law?*, 2 Comp. L. Rev. 140 (2020); R. Michaels, *Transnationalizing Comparative Law*, Maastr. J. & Eur. Comp. L. 352 (2016); H. Spamann, *Empirical Comparative Law*, Ann. Rev. L. & Soc. Sc. 131 (2015); J.C. Reitz, *How To Do Comparative Law*, 46(4) Am. J. Comp. L. 617 (1998).

[16] From the extensive bibliography on the issue, see P.G. Monateri & M.

When embarking on a quantitative study in comparative law, the first step is to define the units and the variables that will make up the data set. The challenge is to find a set of meaningful variables that are also manageable for the researcher or research team. In the next section, I will define some of the variables that may influence the regulatory choices of different legal systems regarding the construction and development of AI systems, referring to the main problems concerning AI applied to constitutional and administrative law.

We will first consider some variables related to the constitutional and political system, selecting national variations in the essential elements of constitutional democracy. Starting from Legrand's idea that it is not possible to know the legal phenomena of a foreign legal system in their entirety[17], I will try to identify some of the factors that give rise to differences – albeit formally based on from common principles – and that influence the transformation of constitutional and administrative structures, including the quality of governance of a democratic system. These 'biopsies' can shed light on the dynamics of the form of government and administration, and the health of liberal democracy in European legal systems.

3. Indicators, Public Law, and AI

From the outset, it is necessary to define the meaning of 'indicators', since not all instruments for legal measurement are necessarily to be considered 'indicators.' According to the OECD, the *Organisation for Economic Co-operation and Development*, an indicator is a 'quantitative or qualitative measure' derived from a series of observed facts, which may reveal a country's performance in a given subject or in a given area but can also indicate directions for change and the degree to which what is being measured conforms to certain standards[18].

In essence, indicators refer to collections of data incorporated into representative rankings of the performance of the units of analysis being studied, which can be compared synchronically and

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Balestrieri, *Quantitative Methods in Comparative Law* (2023); M. Siems, cit. at 11, 207–254; M. Infantino, *Numera et Impera. Gli indicatori giuridici e il diritto comparato* (2019).

[17] In this regard, see A. Stazi, cit. at 15; R. Michaels, cit. at 15; J.C. Reitz, cit. at 15.

[18] See, for instance, OECD, *Government at a Glance 2013* (2013) 192.

diachronically. Underlying these indicators there always is 'a theory, more or less clear, more or less verbalised, more or less solid, that forms the background to the indicator'[19]. Information through numbers is easily seductive, as the same numbers convey an idea of objective truth and scientific authority, going beyond an interpretation of the elements that made their construction possible[20].

However, the belief that numbers produce truth-telling discourses, albeit functional to the power of indicators, is largely misplaced, especially if one considers that '[from] a logical point of view, the control of a theory depends on basic assertions whose acceptance or rejection, in turn, depends upon our decisions'[21]. The validity of any numerical analysis depends not only on the soundness of the theory on which it is based, but also on the organisational dimension of the project in question, the presence of an international structure, and resources available over time to keep the exercise going. Since the end of the last century, for example, the use of mammoth databases has made it possible to analyse previously unimaginable data, as in the case of Martin Gelter and Mathias Siems' research on mutual citations by judges in Europe.

In some of these cases, even quantitative studies can become indicators[22].

Be that as it may, the next section will examine some indicators of constitutional design and administrative organisation that may be useful for studying the construction of complex AI systems and understanding the objectives pursued by AI-driven developments regarding the algorithmic state. A comparative overview can help to highlight similarities and differences between the legal systems in Central and Eastern Europe.

3.1.   Indicators and Constitutional Design

Debates on the regulation of AI tend to present the uncertainty of its impact in terms of risks and opportunities, taking as a reference point the current technological progress and the democratic character of the form of government. From a

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[19] M. Infantino, cit. at 16, 22.

[20] S. Engle Merry, *The Seductions of Quantification*: *Measuring Human Rights, Gender Violence* (2016) 2.

[21] K. Popper, *The Logic of Scientific Discovery* (1992) 104.

[22] M. Gelter & M. Siems, *Citations to Foreign Courts: Illegitimate and Superfluous or Unavoidable? Evidence from Europe*, 62(1) Am. J. Comp. L. 35–85 (2014).

constitutional point of view, many questions remain open, giving rise to a substantial debate among legal scholars about the dangers and opportunities that advanced AI systems can offer to a democratic political system.

Among the issues that go to the heart of the constitutional design of a democratic form of government, the following areas can be identified[23]:

a) Protection of fundamental rights: How can AI be used to protect civil liberties and protect minorities?

b) Rule of Law: How can AI be used to monitor compliance with the law and constitutional procedures and at the same time to make them more transparent?

c) Separation of powers: What is the potential of AI applications for legislative, executive, and judicial powers?

d) Popular sovereignty: How can AI support political decision-making and democratic participation?

The answer to these questions can vary across the legal systems on which this issue focuses. Governments may rely on advanced technology systems to guarantee the same constitutional principles (or to realise their more or less covert breach). Moreover, these increasingly advanced AI tools operate within national legal systems and beyond national borders through decisions that challenge legal principles and practices of precaution and accountability[24].

While the guarantee of constitutional rights and public freedoms is an expression of the democratic principle and is part of the common heritage of systems in the liberal-democratic tradition, there has long been some disengagement from these principles. The construction and use of AI systems could contribute to both disengagement and re-engagement. In this regard, the indicators in this paper can give us useful information about the constitutional and administrative design, on which the foundations of an algorithmic state are laid, of the twelve countries covered in this

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[23] The proposal of these questions is in a report by N. Horn & M. Binder, *Democracy and AI: How Technological Progress Can Strengthen Democratic Structures* (2024) 10. Generally see O. Pollicino and G. De Gregorio, *Constitutional Law in the Algorithmic Society*, in H.-W. Micklitz et al (eds), *Constitutional Challenges in the Algorithmic Society* (2021) 1–22.

[24] See M. Petersmann, J. Dehm, K. Birrell, A. Akhtar-Khavari, *Law and the Inhuman Introductory remarks*, (12 Sep 2024) Crit. Leg. Thinking, at <https://criticallegalthinking.com/2024/09/12/law-and-the-inhuman-introductory-remarks/>, last accessed 23 September 2024.

special issue. According to Mauro Bussani, indicators 'present themselves as allegedly descriptive tools' whose effects 'show how description is always combined with a prescriptive component. [...] Through their quantitative 'comparison', indicators inject into technical and public debates not only variously accurate information [...], but also visions about current and ideal scenarios, relevant problems, goals to be pursued, and ways to achieve them'[25]. From this point of view, I have chosen a few indicators, among the many published, that may be useful in describing the constitutional design within which projects for AI system regulation and development are beginning to be defined.

The first indicator (Table 1) is 'Freedom in the World 2024', an annual report produced by the non-governmental organisation Freedom House, which measures the degree of freedom and recognition of political rights worldwide. The score ranges from 100 (indicating the highest level of recognition of freedoms) to zero (indicating their total absence). The score is based on many parameters, including political rights, political pluralism and participation, the functioning of government, civil liberties, rights of association and organisation, Rule of Law, personal autonomy, and protection of individual rights.

Table 1 – *Freedom in the World* Report 2024 – Global Freedom[26]

	Rank	
Slovenia	96/100	(free)
Czechia	94/100	(free)
Latvia	88/100	(free)
Lithuania	89/100	(free)
Romania	83/100	(free)
Croatia	83/100	(free)
Poland	80/100	(free)
Bulgaria	78/100	(free)
Albania	68/100	(partly free)
Hungary	65/100	(partly free)
Serbia	57/100	(partly free)
Turkey	33/100	(not free)

As these figures show, there are significant numerical differences between the countries in Table 1, particularly between

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[25] M. Bussani, *Introduzione al diritto comparato. Un breviario della globalità* (2022) 95 (author's translation).

[26] See <https://freedomhouse.org/countries/freedom-world/scores>, last accessed 23 September 2024.

those with a high degree of freedom (Czech Republic, Latvia, Lithuania) and those with variously serious critical issues. In this case, it may be interesting to know in which direction AI is being developed and which regulatory model is being used as a reference or source of inspiration for the transplantation of structural elements – that of the European Union, the US, or China. The latter two experiences in the development of AI are usually considered more advanced in regulating artificial intelligence compared to that of Europe, which is considered a 'weaker' actor[27].

The model chosen by the European Union is based on the harmonisation of regulations on AI in the Member States, as reflected in the *AI Act* of 2024[28] and the *Ethics Guidelines for Trustworthy AI* of 2019[29]. However, as happens with legal convergence, it is necessary to distinguish between the objects of regulatory provisions and the processes by which these processes are translated into action. Indeed, it is not certain that convergence – based, for instance, on a European Union regulation – will have the same effects everywhere. The impact of harmonisation depends on variables that are different in each legal system and are integrated in different ways. One of these variables is undoubtedly the democratic nature of a system that can use AI to develop citizens' rights but also limit their scope by using technology in a functional sense, as might happen with an autocratic government that secures a parliamentary majority to impose any decision or form of regulation.

Undoubtedly, the relationship and interaction between AI and democratic systems is particularly complex, arising from the confrontation between the deliberative processes of democratic traditions on one hand and the claim to absoluteness of the supposedly objective mathematical processes of algorithms on the other. Like any technology, AI can be used to promote constitutional freedom, but also to suppress politically undesirable opinions or to score the population in favour of the government. It than therefore be interesting to understand the quality of

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[27] See e.g. M. Timoteo, B. Verri, Y. Wang, *Guidelines for Artificial Intelligence: Comparing the European and Chinese Approaches*, 2 China & WTO Rev. 306 (2021).
[28] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence.
[29] European Commission, *Ethics Guidelines for Trustworthy AI* (2019), at https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai, last accessed 24 September 2024.

democracy and state organisation in its relationship with citizens within legal orders and the significance of these principles for AI systems. To address this, it may be useful to consider another indicator, the *Economist Democracy Index* (Table 2). The *Economist Democracy Index* is a quantitative index that measures the quality of democracy and democratic institutions in 165 States and territories, distinguishing between full democracies, imperfect democracies, hybrid regimes, and authoritarian states. The indicator's definition of 'imperfect democracy' for many countries refers to nations where elections are free, and basic civil liberties are respected. However, there are also critical problems in the functioning of institutions, such as breaches of the freedom of information and other important aspects of democratic life, including low levels of participation in political life, and problems in the functioning of government[30]. The scale ranges from 0 to 10 (from least to most democratic).

Table 2 – The Economist Democracy Index 2023

	Score	Rank	
Czechia	7,97	26	(flawed democracy)
Slovenia	7,75	32	(flawed democracy)
Latvia	7,38	38	(flawed democracy)
Lithuania	7,31	39	(flawed democracy)
Poland	7,18	42	(flawed democracy)
Hungary	6,72	50	(flawed democracy)
Croatia	6,50	58	(flawed democracy)
Romania	6,45	60	(flawed democracy)
Bulgaria	6,41	62	(flawed democracy)
Serbia	6,33	64	(flawed democracy)
Albania	6,28	66	(flawed democracy)
Turkey	4,33	102	(hybrid regime)

The first two tables show some numerical differences in the democratic structure of the countries of interest, almost all of which are characterised by imperfect democracy. This could mean that there are critical points in the functioning of a system, especially in the guarantee of fundamental rights and freedoms. The Czech Republic and Slovenia's rankings are close to full democracy, while Turkey returns a more negative score. These differences may be due to two different models of power distribution: the diffuse model,

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[30] At <https://www.eiu.com/n/democracy-index-conflict-and-polarisation-drive-a-new-low-for-global-democracy/>, last accessed 23 September 2024. The indicator measures the following variables: electoral process and pluralism, civil liberties, functioning of government, participation, and political culture.

distributed among institutions that share it through checks and balances mechanisms, and the centralised model.

How could AI improve the factors analysed by this indicator?

AI systems can support people's fundamental rights and freedoms: e.g. from the protection of life to health, from privacy to the exercise of the right to vote, and from education to freedom of expression and information. However, it cannot be ruled out that AI may have negative consequences, such as the deterioration of democratic structures, and regression. For example, while AI has beneficial uses for science and institutional activity, it could also enable autocratic governments to introduce online censorship and create disinformation through AI-generated images and text that distort reality. Another arbitrary use of AI relates to the proliferation of surveillance systems which, for example, control democratic dissent through social media and facial scanning[31]. In the Freedom House report, the Freedom on the Net indicator examines the methodology used by forty-one governments worldwide to block the movement of information on the Internet. In reality, the report only analyses two countries among those included in this issue: Hungary (for blocking websites) and Turkey (for blocking on websites, restricting internet connectivity, blocking social media platforms and the use of VPNs, as well as forcibly removing online content). Beyond this indicator, it would be necessary to examine concretely whether such tools exist in other jurisdictions and what level of sophistication they can achieve.

Another perspective useful for studying the relationship between the state and AI concerns the Rule of Law and how AI could promote transparency in the actions of political bodies and adherence to constitutional procedures. From this point of view, indicators about the Rule of Law can be useful for assessing positive or negative AI developments in the public sphere. The next table is based on the *Rule of Law Index*, whose main purpose is to promote collaborative actions to strengthen the Rule of Law (Table 3). It is based on several factors, including constraints on government powers, absence of corruption, government transparency, respect

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[31] At <https://freedomhouse.org/report/freedom-net/2023/repressive-power-artificial-intelligence>, last accessed 23 September 2024. See also S. Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (2018).

for fundamental rights, public order and safety, law enforcement, and civil and criminal justice[32].

Table 3 – Rule of Law Index 2023

	Rank
Lithuania	18/137
Czechia	20/137
Latvia	22/137
Slovenia	27/137
Poland	36/137
Romania	40/137
Croatia	45/137
Bulgaria	59/137
Hungary	73/137
Albania	91/142
Serbia	93/137
Turkey	117/137

The numerical differences among the indicators presented so far provide food for thought. Like medical biopsies, these results could reveal how, within each system, there are differences in the level of constitutional organisation that may inevitably affect the regulation, use, and risks associated with the development of AI.

Another important issue, closely related to the principle of the separation of powers – a cardinal principle of democratic systems – concerns the judiciary and possible criticalities arising from the reliance on AI in exercising judicial power[33]. At the beginning of section 3 above, it was noted that both the availability of legal data in digital form and the reliance on quantitative legal methods are increasing. However, in many European countries, the development of AI systems for quantitative legal analysis is still in its infancy, especially for civil and administrative law. Private companies endowed with significant financial and technological resources have initiated collaborations with institutions and individual judicial entities to build and develop systems that can use AI within the courts. It is widely believed that AI systems can be used to exercise judicial functions, assisting judges and simplifying their research and interpretation activities, even if AI

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[32] At <https://worldjusticeproject.org/>, last accessed 23 September 2024.

[33] See generally K. Terzidu, *The Use of Artificial Intelligence in the Judiciary and Its Compliance with the Right to a Fair Trial*, 33 J. Judicial Adm. 154–168 (2022); T. Sourdin, *Technology and Artificial Intelligence* (2020); A. Dory Reiling, *Courts and Artificial Intelligence*, 11(2) Int. J. Court Adm. 1–8 (2020).

cannot completely replace judges or produce independent judicial decisions. In this regard, the most interesting indicator is the European Commission's recent report on justice, the *2024 EU Justice Scoreboard*, which provides a quantitative analysis of EU judicial systems from 2012 to 2022 (Table 4)[34]. The Scoreboard reports the total expenditure per inhabitant on the operation of the judicial systems during the reference period, based on the assumption that a judicial system can only function effectively if it is adequately resourced, both in terms of human resources – magistrates and officials – and in terms of investment in the technological infrastructure. Without these resources, a transitional phase from use of the current IT tools to machines using AI-driven algorithms seems unlikely. The Scoreboard covers the twenty-seven member states of the European Union and therefore does not take into account Albania, Serbia, and Turkey, which are beyond the scope of the indicator.

Table 4 – Government Total Expenditure on Law Courts in Eur per Inhabitant 2012-2022[35]

	Rank
Slovenia	9/27
Bulgaria	15/27
Poland	16/27
Latvia	17/27
Czechia	18/27
Croatia	20/27
Hungary	22/27
Romania	24/27
Lithuania	26/27

While the ranking in Table 4 refers to per capita spending on justice, the ranking for digital technology in the courts differs, as shown in Table 5. The results presented below raise the question of which variables (e.g., the form of government, the guarantee of constitutional principles, as well as the objectives of building digital systems and AI regulations) influence the scores of the countries analysed – a question that must be addressed from a comparative perspective.

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[34] European Commission, *2024 EU Justice Scoreboard*, at <https://commission.europa.eu/document/download/84aa3726-82d7-4401-98c1-fee04a7d2dd6_en?filename=2024%20EU%20Justice%20Scoreboard.pdf>, last accessed 23 September 2024.

[35] European Commission, cit. at 34, Figure 33, 37.

Table 5 – Use of Digital Technology by Courts and Prosecution Services 2023

	Rank
Slovenia	9/27
Hungary	10/27
Latvia	11/27
Lithuania	12/27
Croatia	16/27
Poland	17/27
Romania	18/27
Bulgaria	24/27
Czechia	26/27

It would also be interesting to compare this data with data concerning some courts in non-European countries, such as, for example, the Chinese process of active digitalisation of the court system and the trends and current status of the Chinese Smart Court system. Further, the relationship between the use of AI and the independence of the judiciary remains to be tested. How can the autonomy of judges be properly protected in the construction of advanced technology systems? Are there possible regulatory approaches that could positively or negatively affect this principle?

Another structural element in the constitutional design of a democratic form of government is the political participation of the citizens. It may be useful in this regard to refer to an indicator, the *Political Participation Index, 2023* (Table 6), which records the extent to which citizens can and do participate in politics, with higher values indicating more participation (1 to 10)[36].

Table 6 – Political Participation Index 2023

	Score
Slovenia	7,22
Czechia	7,22
Poland	6,67
Serbia	6,67
Croatia	6,11
Lithuania	6,11
Turkey	6,11
Latvia	6,11
Romania	5,56
Bulgaria	5,56
Albania	5
Hungary	4,44

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[36] At <https://ourworldindata.org/grapher/political-participation-index-eiu>, last accessed 23 September 2024.

This indicator also signals large numerical differences and raises many interesting questions. One of these is whether AI-based technologies can change the political balance within states by promoting broader forms of political participation not only in electoral contexts, or whether AI can lead to regressive phenomena that could limit participation. When considering the use of advanced technologies as a tool to improve participatory processes, it may also be useful to measure the communication and organisational processes between citizens and public institutions and, in particular, the conditions for political participation, the contribution of the media in supporting participation, and citizen participation in public hearings aimed at AI regulation[37]. From this point of view, it is possible to reflect on the lowest scores in Table 6 and question whether they indicate a potential deterioration in the form of government. While all this demonstrates the explanatory potential of the indicator, it is important to emphasise, from the standpoint of methodological pluralism, that other approaches can complement quantitative methods in analysing the ways and means of building AI systems.

3.2.   Indicators and Administrative Organisation

These brief considerations on the constitutional principles that the regulation of advanced technologies takes into account highlight the possible links between technological developments and the varyingly democratic nature of the form of government to which the form of administration is closely related. The application of AI to the institutions of administrative law and the organisational structures of public administration are being studied in various parts of the world. In particular, recent research carried out by the Council of Europe has identified the main problems posed by the development of advanced technologies to the administrations of twenty-four of its Member States. In the study, administrative decisions taken through the use of these technologies are of particular importance. In this respect, it should be made clear from the outset that this development depends on the technology available to public administrations, which may be either simple or

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[37] See W.L. Bennett, A. Segerberg, C.B. Knüpfer, *The democratic interface: technology, political organization, and diverging patterns of electoral representation*, 21(11) Inf., Comm. & Soc'y 1657 (2018).

complex[38]. Some essential issues are linked to the technological structure, ranging from the processing of algorithms to the data taken into account for the decision, from the selection of these data to liability for the administrative decision[39]. In addition, when advanced technological systems are used, other critical issues arise in cases where the machine-learning mechanism allows the algorithm to evolve autonomously. From this point of view, there are also problems related to the transparency of the administrative process and the participation of the parties concerned.

Also, from this perspective, it may be useful to present some contextual indicators that could serve as elements for reflection on the development of the algorithmic 'administrative' state. The emergence of AI and digital technologies is inevitably having an impact on public administration, influencing several aspects such as:

a)   the administrative function;
b)   administrative discretion;
c)   impartiality, transparency, procedural fairness, reasonableness, public accountability;
d)   citizen participation;
e)   administrative organisation and the role of private actors;
f)   administrative justice.

The above indicators cannot cover and address all these perspectives, but others can shed light on the legal systems analysed and their technical development.

One indicator of the quality of administrative action with the principle of impartiality is the *Rigorous and Impartial Administration Index*, which is part of a broader indicator of democracy (the *V-Dem - Democracy Index*), reported in 2023 (Table

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[38] See J. Wolswinkel, *Artificial Intelligence and Administrative Law* (2022); W.L. Bennett, A. Segerberg, C.B. Knüpfer, cit. at 37.

[39] See, among others, O.M. Puigpelat, *The impact of the AI Act on public authorities and on administrative procedures*, 4 *CERIDAP* 238–252 (2023); C. Coglianese, *Administrative Law in the Automated State*, 150(3) Daedalus 104–120 (2021); J. Raso, *AI and Administrative Law*, in F. Martin-Bariteau & T. Scassa (eds.), *Artificial Intelligence and the Law in Canada* (2021) 182–204; A. Goudge, *Administrative Law, Artificial Intelligence, and Procedural Rights*, 42 *Windsor Rev. Leg. & Soc. Issues* 17–50 (2021); M. Finck, *Automated Decision-Making and Administrative Law*, in P. Cane et al (eds.), *Oxford Handbook of Comparative Administrative Law* (2020) 658–676; C. Coglianese & D. Lehr, *Regulating by Robot: Administrative Decision Making in the Machine-Learning Era*, 105 Geo. L. J. 1147–1223 (2017).

7)[40]. The highest value among those considered in Table 6 indicates greater compliance with the principle than is denoted by the lowest value (-2).

Table 7 – W-Dem – Democracy Index 2023 - *Rigorous and Impartial Administration Index*

	Score
Latvia	3,4
Czechia	2,5
Slovenia	1,5
Lithuania	1,1
Bulgaria	0,8
Albania	0,8
Poland	0,7
Romania	0,7
Serbia	0,7
Croatia	0,6
Hungary	0,2
Turkey	-1,4

While the form of government and the form of administration are closely linked, this indicator highlights, on the one hand, how the principle of impartiality underlying public action is implemented to a limited extent in systems with some significant criticalities in terms of the democratic standard of liberal-democratic countries (Hungary, Turkey). On the other hand, the possibility of presenting a biopsy of the autocratic state leaves numerous questions open for the construction of AI systems, which, as I have already pointed out, could be directed toward social control rather than the implementation of the democratic nature of administration. These perplexities can be clarified by analysing the regulatory acts about algorithms for administrative activity in some legal systems. Many countries have enacted ethical guidelines for the use of AI to counteract the distorted use of technology in administrative systems: suffice it to recall the EU ethical guidelines drawn up by the European Commission in 2019[41], the United Kingdom's *Guide* of 2019[42], and Canada's *Algorithmic*

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[40] Our World in Data, *Rigorous and Impartial Administration Index 2023*, at <https://ourworldindata.org/grapher/rigorous-and-impartial-public-administration-index>, last accessed 23 September 2024.

[41] European Commission, cit. at 29.

[42] United Kingdom, *A guide to using artificial intelligence in the public sector* (2019), at https://www.gov.uk/government/collections/a-guide-to-using-artificial-intelligence-in-the-public-sector, last accessed 24 September 2024.

Impact Assessment of 2020[43]. What is important to note is that, while there are many ethical guidelines, there is a lack of rules regarding the operational side[44].

Another indicator that focuses on public administration is the *Corruption Perceptions Index* (CPI), which measures perceived corruption in a country[45]. This index measures the perception of corruption in the public sector in some 180 countries (only forty-one countries were included in the CPI's first edition in 1995), giving each a score ranging from 0 (highest corruption) to 100 (no corruption). In Table 8, the country is represented by an aggregate index based on interviews with various independent and accredited research institutes. The interviews relate to the abuse of power by public officials for private gain, e.g., taking bribes for public contracts, misappropriation of public funds, etc.

Table 8 – Corruption Perceptions Index 2023

	Score	Rank
Lithuania	61	34
Czechia	57	41
Slovenia	56	42
Poland	54	47
Croatia	50	57
Romania	46	63
Bulgaria	45	67
Hungary	42	76
Latvia	37	98
Albania	37	98
Serbia	36	104
Turkey	34	115

The latter indicator allows us to assume that criticism of public authorities by citizens is widespread in the countries surveyed. To some extent, the indicator provides a biopsy of the form of government and administration that the development of AI and digital technology could progressively help to improve,

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[43] Canada, *Algorithmic Impact Assessment tool* (2020), at https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/algorithmic-impact-assessment.html, last accessed 24 September 2024.

[44] See also H. Surden, *The Ethics of Artificial Intelligence in Law: Basic Questions*", in M.D. Dubber, F. Pasquale, S. Das (eds.), *Oxford Handbook of Ethics of AI* (2020) 719–736.

[45] At <https://www.transparency.org/en/cpi/2023>, last accessed 23 September 2024.

strengthening the democratic resilience and functionality of the administrative organisation and the management of public services. However, the path to these results still seems far off, considering the differences and variables that can be assumed from the perspective of numerical comparative law. Although there does not appear to be any specific regulation of AI and administrative decision-making (ADM) in the twelve countries covered in this issue, it is useful to highlight that some courts have introduced principles to guide administrative authorities. For instance, this is the case of the Czech Republic (where principles of reason-giving, the prohibition of abuse of power and administrative discretion, and the principle of protection of the public interest, are included) and of Lithuania (where the principles recognised include the right to be heard, the principle of proportionality, non-discrimination, equality of arms, the right to be duly informed of one's rights and legal status, the right to evidence-based process and adversarial proceedings)[46]. This is the first stage of a regulatory process that can balance the advantages and disadvantages of building digital platforms to serve the articulation of public powers and democratic participation of citizens while respecting constitutionally guaranteed rights and freedoms.

4. Concluding Remarks

In this short paper, I have tried to highlight some problems related to the relationship between the state and AI by doing some preparatory work for macro-comparative research on a number of Central and Eastern European countries. This work highlights several obstacles that complicate comparative research in this area. It seems obvious that any comparative study of this kind should be interdisciplinary, notwithstanding the doubts of many legal scholars about the relationship between law and other sciences. In the case of AI, it is clear that, in the regulation and construction phase of advanced technological systems at the service of government action and public administration, these forms of intellectual closure must be replaced by collaboration with experts in computer sciences and digital technology.

Dialogue between scholars and experts from different disciplines and belonging to different legal traditions is certainly

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[46] See J. Wolswinkel, cit. at 38.

complicated not only by the languages of foreign countries but also by the fact that the language of law differs from that of digital technology. Concepts such as, e.g., 'artificial intelligence,' 'algorithm,' or 'predictive justice' are not clearly defined within and across legal systems, not least because of the limited knowledge of the scientific basis on which the most advanced technology is developing. Consequently, researchers who undertake this task without adequate human and technological resources run the risk of providing only their point of view and, as a result, a limited understanding, which, in some cases, may even distort foreign law[47].

From a comparative law perspective, the choice of methodology for this type of analysis is crucial. Central and Eastern European countries are today an ideal place for comparative law research, due to their diversity of national constitutional designs and histories. Most countries in the macro-region have embarked on paths of transition and departure from the patterns of Socialist law, repositioning themselves from the role of the 'West of the East' to that of the 'East of the West' through 'a process of transformation whose depth and significance defy the discursive boundaries of a simple systemic transition.'[48] What contribution can the construction of AI systems make to this process? The answer is certainly not simple and depends not only on political, social, economic, and technological variables but also on the forms of regulation of advanced technology implemented by the European Union and other transnational actors. The indicators presented show critical issues and differences, even substantial ones, in relation to constitutional design and administrative organisation. At this early stage of development there are, in my opinion, many challenges to conducting a thorough comparison, even across differences, due to the many variables that make each legal system distinct and unique. This is probably one of the great challenges for the future of comparative law(s) and the progressive discovery of 'the algorithmic state'. Can we speak of a new form of state, or is this merely a sliding door for the future?

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[47] See P. Legrand, *Le droit comparé* (5th edn, 2015) 408.
[48] S. Rácz & I. Egyed, *From the "West of the East" to the "East of the West": The postsocialist economic and structural transition of Central and South-Eastern Europe* 15(2) Deturope 10 (2023).