The Normative Power of Artificial Intelligence

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Abstract

Artificial intelligence technologies are increasingly spreading across society. Generative systems, such as ChatGPT and DALL-E, provide only some examples of the expanding consumption of artificial intelligence products in daily lives. Particularly, the reliance on the systems in public and private sectors reinforces the process of technological delegation which characterizes the algorithmic society. However, the standards applied by artificial intelligence systems are not always immutable, particularly when focusing on unsupervised machine learning technologies. These systems do not only make decisions on how to moderate online speech, check employment performances in the workplace, or evaluate credit scores. They also contribute to creating norms, thus defining another generative layer of normativity in the algorithmic society. This work argues that artificial intelligence systems autonomously develop norms by experience and learning within an opaque, technical space that tends to escape the logic of the rule of law. This normative system, or the rule of tech, raises questions for constitutional democracies that are already struggling with solutions to limit other forms of normative powers, particularly the power of online platforms to set private standards. Within this framework, the plurality of these normative powers has put the rule of law under pressure. The expansion of the rule of tech as a source of norms leads to addressing the role of the rule of law in limiting technological delegation in the algorithmic society. The proposal for the Artificial Intelligence Act in Europe is only an example of how the rule of law can limit the expansion of the rule of tech in the digital age. This work analyses the consolidation of the normative power of artificial intelligence systems and examines the spaces for the rule of law in the algorithmic society.

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1. Introduction

The consolidation of the algorithmic society is ongoing,[1] and this process is no longer surprising. Increasingly, public and private actors implement digital technologies that contribute to mediating daily life and society at large,[2] and these interventions have now moved to an online dimension as the overlap between the online and offline dimension.[3] What is particularly concerning is the process of technological delegation that is driving this shift. Decisions on how to moderate online speech, assign credits, or assess the repetition of a certain crime are increasingly left to the determinations coming from a set of codes and statistical models.[4] And the provision of artificial intelligence technologies without a specific purpose, or General-Purpose Artificial Intelligence Systems,[5] which generate text (e.g. ChatGPT) or images (e.g. DALL-E), makes this process increasingly visible and within everyone's reach.

This form of technological delegation has already produced constitutional effects. In the United Kingdom, the determination of school exams and marks by machine learning has triggered public protest about education.[6] The Dutch tax authority used an algorithm to spot childcare fraud, and this use led to discriminating certain "non-western" groups.[7] In the United States, some cases have already underlined forms of discrimination, like in the criminal justice system because of the automated calculation of recidivism rates or in labor practices because of worker monitoring.[8] These examples underline how delegating decision-making to artificial intelligence systems raises constitutional questions not only about the impact of these systems on

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[1] Jack Balkin, *Free Speech in the Algorithmic Society: Big Data, Private Governance, and New School Speech Regulation*, 51 UC DAVIS L. REV. 1149, 1151 (2018).

[2] *See generally* DEBORAH LUPTON, *A Critical Sociology of Big Data, in* DIGITAL SOCIOLOGY 93 (2015).

[3] *See* THE ONLIFE MANIFESTO: BEING HUMAN IN A HYPERCONNECTED ERA (2015).

[4] *See* Solon Barocas & Andrew D. Selbst, *Big Data's Disparate Impact*, 104 CALIFORNIA L. REV. 671 (2016).

[5] Council of the EU, 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, https://data.consilium.europa.eu/doc/document/ST-14954-2022-INIT/en/pdf.

[6] Helen Smith, *Algorithmic Bias: Should Students Pay the Price?*, 35 AI & SOC. 1077, 1077 (2020).

[7] Melissa Heikkilä, *Dutch scandal serves as a warning for Europe over risks of using algorithms*, Politico (29 March 2022), https://www.politico.eu/article/dutch-scandal-serves-as-a-warning-for-europe-over-risks-of-using-algorithms/.

[8] Aziz Z. Huq, *Racial Equity in Algorithmic Criminal Justice*, 68 DUKE L.J. 1043, 1047-50 (2019).

fundamental rights, and, more broadly, on democratic values,[9] but also on the potential marginalization and depowering of the principle of the rule of law in the digital age. These systems are increasingly implemented to make decisions that, *de facto*, are based on (technological) standards embedded in their design that are not necessarily aligned with legal standards or the protection of public interest. Indeed, the threats of "algocracy" do not only question the role of humans,[10] or the protection of fundamental rights,[11] but also the role of the rule of law.[12]

Nonetheless, the concerns about the protection of fundamental rights in the algorithmic society only show part of the story about the normative power of artificial intelligence. Algorithmic technologies are not only instruments to exercise powers,[13] but they also produce norms that do not express a form of public or private normativity. Artificial intelligence systems, particularly in the case of unsupervised machine learning, also self-generate new norms. Rather than mere executing tools based on pre-settled instructions, these systems can also exercise normative power. For example, the removal of online content is not only the result of community standards of social media or the design of algorithmic technologies but also the ability of automated decision-making systems, particularly machine learning and deep learning, to learn how to perform their task. Similar considerations extend to the public sector.[14] Digital surveillance underlines how machines compute certain degrees of risk and then trigger law enforcement action. Decisions are based not only on technical standards but also on a set of self-generated technical norms that assess risks.

Whether hate speech content is considered harmful or a citizen is profiled as a potential suspect up to a certain percentage of risk is a decision that a machine tends to change over time through experience. The more machines moderate content, the more they will improve not only how to perform this activity but also how to shape their assessment. The learning process of these technologies could change how the

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[9] CATHY O'NEIL, WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY 48–49 (2017).

[10] John Danaher, *The Threat of Algocracy: Reality, Resistance and Accommodation*, 29 PHILOS. TECHNOL. 245, 246 (2016).

[11] Paul Nemitz, *Constitutional Democracy and Technology in the age of Artificial Intelligence*, 376 PHIL. TRANS. R. SOC. A 1, 2, 5 (2018).

[12] LAURENCE DIVER, DIGISPRUDENCE: CODE AS LAW REBOOTED 7 (2022).

[13] FRANK PASQUALE, THE BLACK BOX SOCIETY: THE SECRET ALGORITHMS THAT CONTROL MONEY AND INFORMATION 3, 4 (2015).

[14] Monika Zalnieriute et al., *The Rule of Law and Automation of Government Decision-Making*, 82 MOD. L. REV. 425, 427 (2019).

right to freedom of expression prevails over another conflicting right or legitimate interest, such as dignity or public health, even extending or restricting legal notions or private standards of speech. Likewise, generative models provide answers that changes across time. Large language models are trained with new information coming from developers and users, which shape the norms defining the output across time.

This normative power illustrates how saying that code plays the role of the law does not entirely represent the evolution of the algorithmic society. Code is also a source of law. Artificial intelligence systems are examples of how code is law as well as how code creates law, or rather produces norms. Artificial intelligence technologies, and particularly automated decision-making based on machine learning and deep learning, provide another generative normative source that shapes the algorithmic society. While public actors regulate digital technologies[15] or tech giants enforce rights and freedom on a global scale based on their terms of services,[16] technology also expresses a form of governance that escapes the logic of public and private actors, thus challenging the traditional boundaries of the rule of law, or even the rule of the platform. This understanding can be called the rule of tech. The normativity of artificial intelligence tends to escape public and private oversight, thus raising questions beyond the boundaries of liberal, global and societal constitutionalism.[17]

The European Union approach provides a paradigmatic example of the attempt to repositioning the rule of law at the core of the system. The top-down risk-based approach introduce by the Artificial Intelligence Act limits the process of technological delegation, and not only in relation to the normative power of online platforms. In order to address the challenges raised by technological delegation and protect European values, the Artificial Intelligence Act aims to provide a competing normative framework that does not always match the evolution of artificial intelligence technologies such as generative systems.[18] Nonetheless, the European policy on artificial intelligence provides an opportunity to underline the constitutional relevance of these challenges in the algorithmic society.

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[15] POWER AND AUTHORITY IN INTERNET GOVERNANCE: RETURN OF THE STATE? (2021).

[16] DIGITAL DOMINANCE: THE POWER OF GOOGLE, AMAZON, FACEBOOK, AND APPLE (2018).

[17] GUNTHER TEUBNER, CONSTITUTIONAL FRAGMENTS: SOCIETAL CONSTITUTIONALISM AND GLOBALIZATION 1, 2 (2012).

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

Within this framework, this work aims to examine the normative power of artificial intelligence and the position of the rule of law in the algorithmic society. This paper argues that automated decision-making technologies, particularly the case of machine learning and deep learning, produce new rules and standards, thus defining a normative system that competes with other forms of normativity, primarily the rule of law and the rule of platforms. Even if the power of the rule of tech can be addressed through different ways, including, for instance, the introduction of other technological adversarial agents to counterbalance algorithmic decision-making, the rule of law can react to the challenges raised by the rule of tech since the former has been the premise to recognize spaces for the rise of other normativities. Technological delegation has primarily contributed to the consolidation of the normative power of artificial intelligence. Therefore, the primary question is about how to reconcile the clash between the rule of law and the rule of tech. The argument is about the role of digital constitutionalism and the rule of law to limit the exercise of unaccountable powers by shaping the process of technological delegation.

The intrinsic normative power of artificial intelligence technologies is a call for digital constitutionalism,[19] particularly about the protection of rights and democratic values in the algorithmic society. Therefore, understanding the spaces for the rule of law constitutes a priority to ensure that the consolidation of the rule of tech does not lead to the marginalization of the rule of law. By looking at the perspectives brought by liberal, global and societal constitutionalism,[20] this work examines the normative power of artificial intelligence and defines the role of the rule of law in the algorithmic society. This work aims to complement the studies on algorithmic regulation and the rule of law[21] by examining how artificial intelligence systems define a regulatory system based on code and data and generate another layer of normativity that extends beyond the state[22] as well as beyond private oversight.

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[19] GIOVANNI DE GREGORIO, DIGITAL CONSTITUTIONALISM IN EUROPE: REFRAMING RIGHTS AND POWERS IN THE ALGORITHMIC SOCIETY (Mark Dawson et al. eds., 2022);

Edoardo Celeste, *Digital Constitutionalism: A New Systematic Theorisation*, 33 INT'L REV. L. COMPUT. TREATY 76 (2019).

[20] *See generally* Angelo Golia & Gunther Teubner, *Societal Constitutionalism: Background, Theory, Debates*, 15 ICL J. 357 (2021).

[21] *See, e.g.,* ALGORITHMIC REGULATION (Yeung Karen & Martin Lodge eds., 2019); Mireille Hildebrandt, *Algorithmic Regulation and the Rule of Law*, PHIL. TRANS. R. SOC. A. (2018); Roger Brownsword, *Technological Management and The Rule of Law*, 8 LAW INNOVATION TECH. 100 (2016).

[22] NICO KRISCH, BEYOND CONSTITUTIONALISM: THE PLURALIST STRUCTURE OF POSTNATIONAL LAW 27 (2012).

The first part of this work examines the shift from law and territory to norms and spaces, thus underlining the limits of the rule of law, particularly coming from the process of technological delegation. The second part analyzes how artificial intelligence technologies contribute to creating and defining norms based on the generative power of artificial intelligence technologies. The third part addresses how different forms of normativity clash in the algorithmic society and examines the meeting and collision of competing normativities between the rule of law and the rule of tech. The fourth part examines the spaces for the rule of law to address the challenges raised by technological delegation.

2. From Law and Territory to Norms and Spaces

The consolidation of the digital age has contributed to expanding a plurality of normative sources. Social media and standard setting organizations are only two examples of how the rules governing the digital environment do not exclusively originate from states' boundaries. Not so different from other global trends, the development of digital technologies has raised questions about the role and scope of the law by defining different patterns of convergence,[23] usually named "globalization," where the state-centric model has started to lose its power.[24] Even if sovereign claims are still relevant but under pressure,[25] territorial borders are challenged by "a world in which jurisdictional borders collapse, and in which goods, services, people, and information 'flow across seamless national borders.'"[26] The rise of "global law" defines a meta-legal system where different organizations and entities produce and shape norms with extraterritorial implications.[27] Therefore, norms are not only the result of states' production but also come from multiple sources on a global scale.[28]

A striking example of the relationship between law and space is found in the digital environment. At the end of the last century, Johnson and Post wrote that "[c]yberspace

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[23] NEIL WALKER, INTIMATIONS OF GLOBAL LAW (2015).

[24] Eric C. Ip, *Globalization and the Future of the Law of the Sovereign State*, 8 INT'L J. CONST. L. 636, 638 (2010).

[25] Neil Walker, *The Sovereignty Surplus*, 18 INT'L J. CONST. L 370, 383 (2020); Fleur Johns, *The Sovereignty Deficit*, 19 INT'L J. CONST. L 6,7 (2021).

[26] Ran Hirschl & Ayelet Shachar, *Spatial Statism*, 17 INT'L J. CONST. L 387, 387-88 (2019).

[27] GIULIANA ZICCARDI-CAPALDO, THE PILLARS OF GLOBAL LAW 3 (2008).

[28] PAUL SCHIFF BERMAN, GLOBAL LEGAL PLURALISM: A JURISPRUDENCE OF LAW BEYOND BORDERS 3–4 (2012).

radically undermines the relationship between legally significant (online) phenomena and physical location."[29] This statement represents how the gap between law and space and is one of the reasons that critics firmly deny the idea of cyberspace as a new "world" outside the influence of sovereign states.[30] Territorial boundaries are known for their ability to define limited areas where states can exercise their sovereignty. Inside a certain territory, people are expected to comply with the applicable law in that area. Since cyberspace is not a "lawless place," states can impose their sovereignty, especially by regulating network architecture.[31] Despite the relevance of these positions, while states can exercise their sovereign powers over the digital environment within their territories, other systems contribute to producing their norms in turn. More specifically, this trend in the digital age derives from the code's architecture playing the role of a set of rules constituting meta-legal norms of the digital environment.[32]

Digital technologies have contributed to expanding the sources of norms production which defines the normative order of the internet.[33] The multiplication of private and technological standards increasingly led to replacing the relationship between law and territory by the interrelation between norms and spaces. Constitutional democracies have not been spared in this shift. Standards to protect freedom of expression or the enforcement of public policies in the digital environment are often left to discretion of private actors and technological standards on a transnational scale. Instead, constitutions traditionally embody the values and principles to which a specific community adheres and respects. They represent an expression of the social contract between public power and citizens. Constitutions have seen the light in different contexts and local dynamics through different forms of constituent powers.[34] Nevertheless, it is possible to underline the intimate relationship between constitutions and a certain area of space (i.e., territory) over which the sovereign power is exercised and limited.

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[29] David R. Johnson & David Post, *Law and Borders: The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367, 1370 (1996).

[30] Jack L. Goldsmith, *Against Cyberanarchy*, 65 U. CHI. L. REV. 1199 (1998).

[31] Joel R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules through Technology*, 76 TEX. L. REV. 553, 590 (1997–98).

[32] LAWRENCE LESSIG, CODE: AND OTHER LAWS OF CYBERSPACE. VERSION 2.0, 316–17 (2006).

[33] MATTHIAS KETTEMANN, THE NORMATIVE ORDER OF THE INTERNET: A THEORY OF RULE AND REGULATION ONLINE 233–34 (2020).

[34] Mattias Kumm, *Constituent Power, Cosmopolitan Constitutionalism, and Post-Positivist Law*, 14 INT'L J. CONST. L 697, 701 (2016).

The relationship between (constitutional) law and space is intricate. The law stands on a territorial space and relies on political processes legitimizing its creation. Formally, outside the domestic legal framework, other legitimized binding forces over a certain territory do not exist unless tolerated, accepted, or even authorized, by the legal framework itself. Substantially, the law is only one of the systems influencing space. From the perspective of societal constitutionalism, the law is one of the systems interacting with other functional social systems. Although social systems tend to be normatively closed since they autonomously develop their own systems, these systems are cognitively open.[35] Therefore, law, economics, technology, science, and politics develop their own rules through their institutions, yet at the same time they can observe their social environment and other systems and be indirectly affected by them. If one focuses on this process of autopoiesis, state-based law is not the only legitimated normative infrastructure in a certain territory anymore. Instead, it is only one of the fragments composing a constitutional puzzle on a global scale. Even in the digital age, law, technology, and society, as examples of social systems,[36] produce internal norms while continuously shaping each other in a process of mutual influence,[37] or rather digital constitutivity.

The law is the result of its logic as well as the compromise between the technological architecture, social norms, and market forces.[38] At the same time, the law indirectly influences the other systems which, even if characterized by self-referentiality, inevitably are part of a greater understanding. Usually, legal categories, such as rules, authority, or rights and freedoms, contribute to shaping the boundaries of recognized powers. These definitions do not exist outside the legal framework but are created within the rationality of the law. However, these systems are not proof of systemic interferences. Likewise, legal systems based on definitions, scope, and enforcement shape the boundaries and characteristics of technology and society.[39] In other words, the peculiarity of the law as a social subsystem is to define spaces as delegated and autonomous manifestations of powers.

This form of pluralism leads to considering legal constitutionalism under a broader umbrella where the link between law and territory is increasingly replaced by the

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[35] Gunther Teubner, *Autopoiesis in Law and Society: A Rejoinder to Blankenburg*, 18 L. & Soc'y Rev. 291, 293, 296 (1984).

[36] Niklas Luhman, Social Systems (1984).

[37] Gunther Teubner, Law as an Autopoietic System 13 (1993).

[38] Lessig, *supra* note **Error! Bookmark not defined.**, at 123.

[39] David Delaney, *Legal Geography I: Constitutivities, Complexities, and Contingencies*, 39 Progress Hum. Geographies 96, 98 (2015).

relationship between norms and powers coming from different autonomous rationalities that shape each other in a process of mutual influence. By moving from a unitary view of the law to legal pluralism, it cannot be neglected how other systems develop their norms and principles, irrespective of whether they are considered as "law." Therefore, the relationship between law and territory characterizing state sovereignty tends to lose its exclusiveness, thus, leaving space for the consolidation of another dyadic relationship between norms and spaces.

Since the forces shaping the digital environment are no longer only public or private, the implementation of artificial intelligence technologies adds another creative layer of norms that provide alternative standards to the protection of constitutional values, such as fundamental rights and democracy. This challenge is primarily connected with the normative power of artificial intelligence technologies that complement the idea of "code is law" with the perspective of "code as source of law."

3. The Rule of Tech

The normative power of artificial intelligence technologies is primarily connected to the ability of making decisions and learning from experience. Artificial intelligence systems are no longer relegated to research labs, but these technologies are now spreading across society as underlined by generative models. The development of these systems would not raise constitutional concerns if they were not left to make decisions on fundamental rights and democratic values.

At first glance, algorithmic systems appear as neutral technology that can extract values from information and that are useful for society, specifically as public and private actors use them to provide public services or run a business. The autonomy of these machines is also the reason for their role in finding new information and driving scientific discovery. However, algorithms are far from being mere neutral technologies or mathematical models that provide outcomes in a certain form based on the processing of information. Rather, these technologies transform inputs into outputs, and thus, *de facto*, they express a value judgement. In other words, automated decision-making systems are value laden. These technologies make decisions that affect individual and collective rights as well as expectations and trust. These systems are far from perfect, and they lead to potential discriminatory bias or to the exposure

of objectionable content,[40] as demonstrated in the case of content moderation[41] or search engines.[42] Even large generative models raise this question considering that their inputs does not merely come from the user's question but also from the training of data on the Internet that could reflect other biases.[43]

Besides, potential biases are not only the result of data processing but also embedded by humans who are involved in the phase of programming and developing.[44] As such, human biases and values are reflected in the technologies and their design.[45] Whether an algorithm aims to protect the right to freedom of expression depends on how many posts it will keep online. Likewise, an automated decision-making system could be more inclined to profile criminals based on the need to protect public interests over privacy. These constitutional conflicts are usually defined in the architecture of these technologies. Therefore, in this case, humans play a critical role as the constitutional creators of algorithmic checks and balances.

Nonetheless, these (algorithmic) decisions are not exclusively based on design choices. These technologies also learn how to perform their tasks, which shapes their own code, or, from a constitutional perspective, the weight of the original system of checks and balances. Such machine determinations mediate rights and freedoms based on a mix of presettled and self-generating standards. By processing vast amounts of information and data, artificial intelligence systems do not only lead to complementing, or replacing, legal norms with computing standards,[46] but also create new norms which could differ from private standards or states' regulation.

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[40] Andrea Romei & Salvatore Ruggieri, *A Multidisciplinary Survey on Discrimination Analysis*, 29 KNOWLEDGE ENG'G REV. 1, 6 (2014); STUD. APPLIED PHIL., EPISTEMOLOGY, AND RATIONAL ETHICS, DISCRIMINATION AND PRIVACY IN THE INFORMATION SOCIETY 1 (Bart Custers et al. eds, 2013); Kevin Macnish, *Unblinking Eyes: The Ethics of Automating Surveillance*, 14 ETHICS AND INFO. TECH. 151, 158 (2012).

[41] Reuben Binns et al., *Like Trainer, Like Bot? Inheritance of Bias in Algorithmic Content Moderation, in* SOCIAL INFORMATICS 405–06 (2017).

[42] SAFIYA NOBLE, ALGORITHMS OF OPPRESSION: HOW SEARCH ENGINES REINFORCE RACISM 5 (2018).

[43] Melissa Heikkilä, *The EU wants to regulate your favorite AI tools*, Politico (10 January 2023), https://www.technologyreview.com/2023/01/10/1066538/the-eu-wants-to-regulate-your-favorite-ai-tools.

[44] Brendt D. Mittelstadt et al., *The Ethics of Algorithms: Mapping the Debate*, 3 BIG DATA & SOC'Y 1, 3 (2016).

[45] Helen Nissenbaum, *How Computer Systems Embody Values*. 34(3) COMPUTER 120 (2001).

[46] MIREILLE HILDEBRANDT, SMART TECHNOLOGIES AND THE END(S) OF LAW: NOVEL ENTANGLEMENTS OF LAW AND TECHNOLOGY (2016).

Within this framework, artificial intelligence systems develop norms leading to decisions that *de facto* are constitutional. In this sense, the technical norms resulting from artificial intelligence applications become constitutionally normative. For instance, when considering social media, algorithms determine what information is displayed first and what is hidden, for instance, recommending a specific journal article or blog post to read. They moderate and curate content based on categories, such as hate speech or disinformation.[47] These activities are not fixed in a timeframe but change across time through experience and adjustments. In turn, such autonomy leads artificial intelligence technologies to enforce and balance rights and freedoms as well as to shape and develop a system of norms by experience. In a sense, this context is similar to how common law systems create norms through the accumulation of courts' case law or to how civil law systems adjust their norms to address new challenges.

Unlike the law of nature, in the realm of artificial intelligence it is not always possible to predict the consequences and the forces that shape the creation of these norms. The norms of artificial intelligence are not hidden into an opaque policy framework or the law of nature, such as gravity. There is no democratic oversight on their creation, and these norms also do not answer to the logic of "conditional rationality"[48]—if A happens, then B is expected. Rather, artificial intelligence technologies reflect the condition that if A happens, then B could be expected. Therefore, the reasons for this opacity are not only related to legal barriers or opaque policy-making but also to the rule of math and statistics.

It is precisely here that artificial intelligence systems challenge the role of the rule of law. These technologies do not aim to provide a certain answer but to secure a reasonable outcome. The implementation of these technologies has moved the focus from causality to probabilities and correlations. The limit of traditional systems of processing to deal with the vast amount of data encourages the implementation of statistical methods. This shift from causality to probability is not neutral, and it raises concerns about the reliance on the outcomes of these technologies, particularly when they are used to make or support decisions on fundamental rights and democratic values, as well as about the predictability of their norm creation.

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[47] TARLETON GILLESPIE, CUSTODIANS OF THE INTERNET: PLATFORMS, CONTENT MODERATION, AND THE HIDDEN DECISIONS THAT SHAPE SOCIAL MEDIA (2018).

[48] Håkan Hydén, *AI, Norms, Big Data, and the Law*, 7 ASIAN J.L. & SOC'Y 409 (2020).

The opacity of artificial intelligence escapes the logic of the rule of law and moves to the realm of statistics and probability based on the large amount of data that makes any expectation of a certain outcome unpredictable. The law is usually based on definitions that aim to ensure uniformity and equality. Instead, algorithmic technologies make decisions without relying on a legal basis. Their decisions are not based on a threshold of illegality but on statistical approaches that lead, for instance, to pattern recognition, clustering, and classification of objects. All these activities are shaped by multiple influences, such as the code, the data used in a certain case, and the learning capabilities of algorithmic technologies that can also lead to the creation of new norms. The definition, enforcement, and balancing of these rules are not only mediated by design choices but also by the power of math, which is the real governor of the rule of tech.

As autonomous agents, these technologies do not align their behaviors based on unique norms, and there is no system to check this consistency, such as a model of algorithmic review. The balancing of conflicting interests is based on a probabilistic approach that leads to clustering a certain object or defining patterns. The opacity of decision-making does not always allow to defining which values have guided a certain outcome, thus limiting the possibility to detect reflexivity. As the law tends to reflect its dynamics, such as injustice or inequality, it is possible to argue that the same is true for algorithms that reflect their technical and social underpinning values.[49] Therefore, in this sense, even if artificial intelligence systems can be considered potentially reflexive, they tend to be lawless.

This consideration also explains why the norms created by artificial intelligence technologies cannot be considered as social norms.[50] The logic of artificial intelligence is not based on the mere acceptance and sharing of rules agreed upon by a community. Although operational standards are defined by programmers and developers while also shaped by service providers, there is not a unique community that defines the common standards that govern algorithmic systems. Therefore, rather than social norms, algorithmic technologies create self-generating technical norms with societal constitutional implications. This context seems particularly relevant when considering the implementation of increasingly autonomous technologies in the algorithmic sphere.

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[49] Jennifer Cobbe, *Legal Singularity and the Reflexivity of Law*, in IS LAW COMPUTABLE?: CRITICAL PERSPECTIVES ON LAW AND ARTIFICIAL INTELLIGENCE, 1, 16 (Simon Deakin & Christopher Markou eds, 2020).
[50] ERIC POSNER, LAW AND SOCIAL NORMS (2000).

Within this framework, the normative power of artificial intelligence leads to examining the remaining spaces for the rule of law in the algorithmic society. The norms shaped by state or private normativity do not exhaust the forces which overlap and compete in a process of mutual influence. Therefore, the position of the rule of law can be examined by looking at the relationship among different layers of normativity in the digital age.

4. Competing Normative Powers in the Algorithmic Society

The normative power of artificial intelligence technologies is another example that underlines how the rule of law is under pressure in the digital age and how its realm is limited by the expansion of different spaces that produce norms. The scope and effectiveness of the law in the digital environment has been a contentious issue since the advent of the internet. Constitutional democracies have highly struggled with extending their powers, and laws, on a global scale beyond their territorial boundaries as particularly underlined by the role of courts.[51] These challenges have led to relying on alternative systems to enforce public policies online, particularly by delegating private actors to serve such a role.[52]

This shift has raised questions for the rule of law that meets some limits when walking outside the public realm and moving to the private sector. The rule of law is a guide for public actors to ensure equal treatment before the law, and it protects rights and freedoms and limits the abuse of powers by unaccountable authorities holding decision-making powers.[53] The principle of the rule of law constitutes a guide for public actors when interfering with rights and freedoms.[54] This understanding also applies in the field of digital technologies that public actors can use as instruments of social control.

The threats to the principle of the rule of law are linked not only to public interferences and the abuse of public powers but also to the possibility that private actors have developed a set of private standards that clash with public values, precisely when

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[51] ORESTE POLLICINO, JUDICIAL PROTECTION OF FUNDAMENTAL RIGHTS ON THE INTERNET: A ROAD TOWARDS DIGITAL CONSTITUTIONALISM? (2021).

[52] Rebecca Tushnet, *Power Without Responsibility: Intermediaries and the First Amendment*, 76 GEO. WASH. L. REV. 101 (2008).

[53] Jeremy Waldron, *The Concept and the Rule of Law*, 43 GA. L. REV. 1, 5 (2008).

[54] Martin Krygier, *The Rule of Law: Legality, Teleology, Sociology*, RELOCATING THE RULE OF LAW 1 (2009).

their economic freedoms turn into forms of power. Even before focusing on the rule of law in relation to the rule of tech, the question is how the rule of law can play a critical role in shaping the normative power of the private sector.[55] In other words, the space of the rule of law is not only limited by the consolidation of the rule of tech but also by the rise of private normativities that are usually expressed through self-regulation.

This trend can be analyzed from multiple perspectives in the digital age. In the case of social media, these actors set and enforce their standards of protection while balancing conflicting interests at stake. The deplatforming of former President Donald Trump in the aftermath of his support of the violent attack on the Capitol is only one of the examples that underlines how platforms have consolidated their role as gatekeepers of information.[56] The governance of this form of decision-making is not shared but rather centralized and covered by unaccountable purposes. In this case, rights are established by a private form of authority through opaque terms of service contracts that are designed and enforced by private actors.[57] These spaces are then shaped by private actors—in this case, platforms—who impose their private normative powers over the rule of law.

The competition between public and private normative powers does not exhaust the plurality of sources meeting and overlapping in the digital age. The normative power of artificial intelligence technologies defines another layer of normativity. In this case, the rule of law clashes with standards that mediate rights and freedoms through an algorithmic calculation that generates norms in a mostly opaque and not entirely accountable way for public and private actors. Checking whether automated decision-making technologies are aligned with the legal norms or if they express the values and principles defined in their technological design is not always possible. The problem of black box and biases are only two of the most important examples of the pitfalls

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[55] Nicolas Suzor, *Digital Constitutionalism: Using the Rule of Law to Evaluate the Legitimacy of Governance by Platforms* 4 Soc. Media + Soc'y 1 (2018).

[56] Sonja West & Genevieve Lakier, *The Court, the Constitution, and the Deplatforming of Trump*, Slate (Jan. 13, 2021), https://slate.com/technology/2021/01/deplatforming-trump-constitution-big-tech-free-speech-first-amendment.html.

[57] Hannah Bloch-Wehba, *Global Platform Governance: Private Power in the Shadow of the State*, 72 SMU L. Rev. 27 (2019); Woodrow Hartzog, *Fighting Facebook: A Campaign for a People's Terms of Service*, CIS (May 22, 2013), https://cyberlaw.stanford.edu/blog/2013/05/fighting-facebook-campaign-people%E2%80%99s-terms-service.

relating to automated systems.[58] Machines are still not entirely able to interpret real dynamics and exactly understand contexts and emotions,[59] and it is likely that they will need some form of human support. These decisions escape even the scrutiny of their developers and programmers, and the scale of artificial intelligence application does not make oversight profitable, or even possible, to check such norms production. This form of technological regulation is different from legal regulation. Technological regulation is not the result of a democratic process; it excludes disobedience, and it does not allow contest due to lack of transparency and accountability of decision-making. Moreover, in the case of artificial intelligence technologies, the lack of transparency and accountability of these systems challenges the possibility of monitoring for public actors as well as for private actors implementing these technologies.

Even technological solutions to solve these challenges do not provide an exhaustive approach. For instance, the decision-making process of artificial intelligence can be subject to an adversarial mediation.[60] Rather than designing artificial intelligence systems able to understand the rule of law or the protection of fundamental rights, the goal is to introduce other digital agents that can counterbalance conflicting interests in automated decision-making. This trend towards the use of adversarial systems, which is particularly relevant in the field of machine-to-machine communication, also reflects the tendency of legal systems to recognize a central role in the exchange of different positions in cases involving conflicting interests.[61] In this sense, as courts ensure judicial review and adjudicate cases based on adversarial systems, artificial intelligence would meet another automated voice that could balance other values in the decision-making process. In a sense, adversarial systems could lead to a process of constitutionalizing artificial intelligence by introducing check and balances.

The primary concern related to the implementation of adversarial systems is related to the use of technology to solve technology. If it is still not possible to explain the reasons for algorithmic outcomes in a certain case, the primary question is whether it is possible to rely on another opaque system to make an outcome fairer. This problem

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[58] Tal Zarsky, *Transparent Predictions*, 4 U. ILL. L. REV. 1503, 1507 (2013); Matteo Turilli & Luciano Floridi, *The Ethics of Information Transparency*, 11 ETHICS & INFO. TECH. 105 (2009).

[59] Andrew McStay & Lachlan Urquhart, *This Time with Feeling? Assessing EU Data Governance Implications for Out of Home Emotional AI*, 24 FIRST MONDAY 4–5 (2019).

[60] https://arxiv.org/abs/1611.01236#

[61] Mireille Hildebrandt, *Privacy as Protection of the Incomputable Self: From Agnostic to Agnostic Machine Learning*, 20 THEORETICAL INQUIRIES L. 83 (2019).

is not only linked to the technical limits of computing the law[62] but also to the ability of artificial intelligence systems to create norms that inevitably would shape the weights of checks and balances that aim to ensure a fairer process. One solution would be based on a public system of adversarial artificial intelligence.[63] This approach would rely on algorithmic technologies that are developed or overseen by public actors to check and proceduralize automated decision-making processes, also supporting the collection of data about the adversarial outcomes and the adjustment of algorithmic systems to the rule of law.

However, adversarial systems can also amplify biases, and the normative power of these technologies could make adversarial artificial intelligence ineffective due to the changing set of norms developed through experience. The limit of adversarial systems also results from the predominance of private actors in developing and implementing automated decision-making systems, particularly when there is no regulation requiring private actors to pursue a public interest and respect fundamental rights.

The rule of tech does not result from a democratic and dialectic process but from an opaque mix governed by technical determinations. The power to computationally materialize legal notions through digital means and to generate norms raises concerns for constitutional democracies. Individuals are increasingly surrounded by technical systems that influence their decisions without them having the possibility to understand or control this phenomenon. The mediation of automated technologies increasingly leads users to participate in a "modulated democracy."[64] Democratic values in the digital age are likely to be mediated by the implementation of artificial intelligence systems as well as by the production of technical norms outside any form of public scrutiny.

Within this framework, the primary question is how the rule of law can mitigate the challenges raised by technological delegation in this plural and networked expression of normative powers. This question is central for constitutional democracies to mitigate the risk that constitutional values, primarily fundamental rights and democratic values, are driven by unaccountable logic resulting from the power of the private sector and the lawlessness of artificial intelligence systems. Therefore, it is

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[62] Christian Markou & Simon Deakin, Ex Machina Lex: Exploring the Limits of Legal Computability (2020).

[63] Niva Elkin-Koren, *Contesting Algorithms: Restoring the Public Interest in Content Filtering by Artificial Intelligence*, 7 Big Data & Soc'y 1 (2020).

[64] Julie E. Cohen, *What Privacy Is For*, 126 Harv. L. Rev. 1904, 1905 (2013).

critical to position the rule of law to understand how it is possible to limit the delegation of decision-making to the rule of tech.

5. Designing Technological Delegation

The consolidation and expansion of the rule of tech has led to the contraction of the spaces for the rule of law. Accountability, transparency, and explainability have increasingly characterized the questions about the law of artificial intelligence.[65] Thus, they have become the most important parts of algorithmic regulation.[66] At first glance, this attention shows how constitutional democracies are at a crossroads. On the one hand, public actors can leave artificial intelligence technologies to exercise their normative power or, on the other hand, they can limit, or even ban, delegation of decision-making to these systems. Both these cases lead to constitutional tensions, particularly in terms of effectiveness and proportionality. In the first scenario, constitutional tolerance could amplify the normative power of artificial intelligence by expanding the cases of delegation to systems that are outside any public or private oversight. In the second scenario, a general ban could not only be ineffective due to potential technological circumvention but also interfere with other constitutional interests, primarily economic freedoms, thus slowing down the development of algorithmic technologies and increasing the uncertainty about their implementation. The ban of ChatGPT by the Italian Data Protection authority has underlined the limit of generalized ban of artificial intelligence technologies.[67]

Within this framework, the primary challenge is about striking a balance between leaving spaces for artificial intelligence and introducing safeguards that limit technological delegation in cases that touch the values of constitutional democracies. The question is how to strike a balance between these two constitutional poles by

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[65] Margot E. Kaminski, *The Right to Explanation, Explained*, 34 BERKELEY TECH. L.J. 189, 193–92 (2019); Alyssa M. Carlson, *The Need for Transparency in the Age of Predictive Sentencing Algorithms*, 103 IOWA L. REV. 303, 324 (2017); Andrew D Selbst & Julia Powles, *Meaningful Information and the Right to Explanation*, 7 INT'L DATA PRIV. L. 233, 233, 242 (2017); *see generally* Reuben Binns, *Algorithmic Accountability and Public Reason*, PHIL. & TECH. 543 (2017) (discussing questions accountability has raised); *see generally* John Zerilli et al., *Transparency in Algorithmic and Human Decision-Making: Is There a Double Standard?*, 32 PHIL. & TECH. 661 (2019) (discussing issues of transparency in relation to human decision making and AI).

[66] CONSTITUTIONAL CHALLENGES IN THE ALGORITHMIC SOCIETY (Hans-W. Michlitz et al., eds., 2021).

[67] Italian Data Protection Authority (30 March 2023), https://www.garanteprivacy.it/home/docweb/-/docweb-display/docweb/9870832.

designing processes of delegation and collaboration based on the rule of law as the primary guidance. This approach questions how constitutional democracies accept or react to the challenges raised by a plurality of normative powers that compete with the rule of law.

The process of delegating other agents the responsibility to set standards or make decisions does not define a new trend for constitutional democracies. Powers have been delegated across multiple entities throughout history, and decision-making has often been transferred from the public realm to the private sector.[68] This process is still relevant in the digital age as underlined by the neoliberal approaches adopted by constitutional democracies that have rendered online platforms private makers of standards and enforcers on a global scale.[69] Boyle already wondered whether the internet would have led to a transformation that challenges basic assumptions not only concerning economics but also constitutional and administrative law.[70] The rise of digital private powers can primarily be considered the result of an indirect delegation of public functions. The shift from public to private in the digital environment is not an isolated case, but rather, it is the result of a general tendency towards the transfer of functions or public tasks from lawmakers to specialized actors in both the public and private sectors.

This trend is part of a larger system of delegation which no longer exclusively involves the relationship between the lawmaker and the government (legislative-executive) but also two new branches, respectively public bodies such as agencies (fourth branch)[71] and private entities dealing with delegated public tasks (fifth branch).[72] The delegation of public functions is not merely a unitary phenomenon; it can include agreements between public and private actors based on public-private partnership schemes where private entities provide goods or services.[73] The cases of smart cities or governmental services are examples of the shift of responsibilities from the public

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[68] *See* JODY FREEMAN & MARTHA MINOW, GOVERNMENT BY CONTRACT. OUTSOURCING AND AMERICAN DEMOCRACY, 6–8 (2009).

[69] *See* Hannah Bloch-Wehba, *Global Platform Governance: Private Power in the Shadow of the State*, 72 SMU L. REV. 27, 38 (2019); *see also* DAVID KAYE, *Preface, in* PLATFORM REGULATION: HOW PLATFORMS ARE REGULATED AND HOW THEY REGULATE US, 9, 12 (2017).

[70] *See* James Boyle, *A Nondelegation Doctrine for the Digital Age?*, 50 DUKE L. J. 5, 5 (2000).

[71] *See* MARK TUSHNET, THE NEW FOURTH BRANCH: INSTITUTIONS FOR PROTECTING CONSTITUTIONAL DEMOCRACY 35, 158 (2021).

[72] *See* Harold I. Abramson, *A Fifth Branch of Government: The Private Regulators and Their Constitutionality*, 16 HASTINGS CONST. L.Q. 165, 168, 171 (1989).

[73] ALBERT SÁNCHEZ GRAELLS, PUBLIC PROCUREMENT AND THE EU COMPETITION RULES (2d. ed. 2015).

sector to private entities through instruments of public procurement.[74] In other cases, the delegation of public functions consists of the creation of new (private or public) entities to perform public tasks, such as the provision of products and services or support to rulemaking activities. In these cases, the establishment of a new government corporation or agency is one of the most evident examples.[75]

The consolidation of the rule of tech amplifies the questions about the limits of delegating powers in the digital age, not only across public and private actors but also to normative technological systems that challenge oversight. In this case, the normativity of artificial intelligence systems tends to escape the dichotomy of the public/private divide, thus making some of the constitutional instruments ineffective to address unaccountable powers. For instance, the horizontal effect of fundamental rights has a limited reach in this case,[76] particularly considering that it is not possible to require artificial intelligence to respect fundamental rights. Moreover, even if it is possible to apply this approach to private actors which implement these technologies, the normative power of artificial intelligence technologies could limit the possibility to intervene for public and private actors to protect rights and freedoms, or even to ensure constitutional values such as due process and proportionality.

The normative power of artificial intelligence can be addressed by expanding the rule of law in the digital age. The tolerance of constitutional democracies tends to trigger the rise of new normative powers that compress the spaces of the rule of law. When this compression leads to constitutional challenges, it is for the rule of law to expand its role and mitigate the expansion of unaccountable normative powers. This approach leads to adopting a legal framework in the algorithmic society that, first, requires public and private actors to follow procedural safeguards when delegating the setting of standards and decision-making to artificial intelligence systems, and, second, provides remedies against the effects of automated decision-making on fundamental rights and democratic values. Rather than merely leaving artificial intelligence systems free to make decisions or banning potential applications, this approach focuses on designing ex-ante safeguards and ex-post remedies that mitigate the challenges raised by the rule of tech.

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[74] Sofia Ranchordás & Catalina Goanta, *The New City Regulators: Platform and Public Values in Smart and Sharing Cities*, COMPUT. L. & SEC. REV. 1, 4–5 (2020).

[75] MARTA SIMONCINI, ADMINISTRATIVE REGULATION BEYOND THE NON-DELEGATION DOCTRINE: A STUDY ON EU AGENCIES (2018).

[76] *See* Mark Tushnet, *The Issue of State Action/Horizontal Effect in Comparative Constitutional Law*, 1 INT'L J. CONST. L. 79, 86 (2003); *see also* Stephen Gardbaum, *The Horizontal Effect of Constitutional Rights*, 102 MICH. L. REV. 388, 388 (2003).

Procedural safeguards in the digital age, such as adequate notice given to individuals affected by the decision-making process, have already been advanced in recent years.[77] The case of algorithmic impact assessment is only one example of a procedural safeguard that can reduce the consequences of unaccountable delegation. The Council of Europe, particularly the ad hoc committee on artificial intelligence, has focused on the introduction of algorithmic impact assessment to increase the accountability of the public and private sectors when implementing artificial intelligence technologies.[78] Likewise, the possibility for individuals to access remedies, such as judicial review, is another critical step to increase accountability,[79] as underlined by the US Blueprint for an Artificial Intelligence Bill of Rights.[80] The relevance of remedies in the algorithmic society is also connected with the centrality of humans, as underlined by the European High-Level Expert Group on Artificial Intelligence.[81]

However, the tolerance of constitutional democracies to other expressions of normative powers deeply influenced regulatory approaches. For instance, the constitutional approaches to the rise of online platform powers across the Atlantic have underlined a trend towards polarization in the last twenty years.[82] From the first period of regulatory convergence based on neoliberal positions at the end of the last century, the United States and the European Union have taken different paths. While the EU has slowly complemented its liberal imprinting with a constitutional democratic strategy, as underlined by the adoption of the General Data Protection

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[77] Danielle Keats Citron, *Technological Due Process*, 85 WASH. U.L. REV. 1249, 1281–82 (2008).

[78] Ad Hoc Committee on Artificial Intelligence: Possible elements of a legal framework on artificial intelligence, based on the Council of Europe's standards on human rights, democracy and the rule of law, Council of Europe (Dec. 3 2021), https://rm.coe.int/cahai-2021-09rev-elements/1680a6d90d.

[79] *See* Kate Crawford & Jason Schultz, *Big Data and Due Process: Toward a Framework to Redress Predictive Privacy Harms*, 55 B.C.L. REV. 93, 116 (2014).

[80] The White House, *Blueprint for an AI Bill of Rights: Making Automated Systems Work For The American People* (Oct. 2022), https://www.whitehouse.gov/wp-content/uploads/2022/10/Blueprint-for-an-AI-Bill-of-Rights.pdf.

[81] *See Ethical Guidelines for Trustworthy AI*, EUROPEAN COMMISSION (Apr. 8, 2019), https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai.

[82] Giovanni De Gregorio, *Digital constitutionalism across the Atlantic*, 11 GLOBAL CONSTITUTIONALISM 297 (2022).

Regulation,[83] the Digital Services Act,[84] and the Digital Markets Act,[85] the US constitutional framework has not expressed the same concern and instead follows an opposite path. For instance, the Communication Decency Act still immunizes online intermediaries,[86] including modern online platforms, from liability when moderating users' content. In the field of data, apart from some national attempts,[87] no harmonized approach exists to privacy and data protection at the federal level. In the fields of both content and data, the US policy is still anchored to a digital liberal approach that considers the First Amendment as the primary beacon of the algorithmic society.

Moreover, constitutional democracy are not only influenced by the challenges raised by legal pluralism in the digital age, but also driven by the interests to ensure competitiveness in the technological sector in the long run. Restricting or even banning artificial intelligence systems can slow down the growth and development of digital products and services. In other words, granting extensive protection of fundamental rights over innovation could make constitutional democracies "standard-takers" rather than "standard-makers" in the field of artificial intelligence. Furthermore, if it is true that the market and democracy are intimately connected, the choice of constitutional democracies to limit the normative power of artificial intelligence is driven more by the threats of competitive disadvantages rather than the protection of fundamental rights and democratic values.

Considering the role of artificial intelligence for the fourth industrial revolution, this is not a trivial constitutional issue. The constitutional advantage of protecting fundamental rights and democratic value in the short term could lead to a situation of *de facto* technological disadvantage. The need to rely on systems that are developed in areas of the world where the lack of restrictions and liberal approach leaves spaces for the development of unaccountable models of governance would affect the same constitutional rights driving the restrictive approaches to the development of artificial

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[83] *See Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016* (explaining 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 O.J. L 119/1).

[84] *See generally Commission Proposal for a Regulation of the European Parliament and of the Council on a Single Market for Digital Services (Digital Services Act) and amending Directive 2000/31/EC*, COM (2020) 825 final (2020).

[85] *See Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act)*, at 4 COM (2020) 842 final.

[86] Telecommunications Act of 1996, Pub. L. No. 104-104, § 230, 110 Stat. 138, 138 (1996).

[87] *See e.g.*, CAL. CIV. CODE § 1798.100 (West 2018).

intelligence systems. In other words, the price to expand the rule of law in the algorithmic society could lead to making the rule of tech stronger in the long run.

The European strategy is an example of the struggle with repositioning the rule of law in the algorithmic society. Even before the adoption of the Artificial Intelligence Act, the EU had adopted critical steps. For instance, the Digital Services Act underlines a paradigm shift in the EU by limiting online platforms' normative powers through procedural safeguards.[88] These measures could be considered not only an attempt to adapt the digital economy to European goals but also a reaction against the consolidation of other forms of normative powers. The Commission has even launched a declaration of rights and principles in the digital age,[89] which defines a human-centric approach guiding the European digital transition. The declaration aims to put people at the center and foster solidarity and inclusion, freedom of choice, participation in the digital public space, safety, security and empowerment, and sustainability. It is an expression of the consolidation of digital constitutionalism,[90] thus underlining how the digital future of the EU will likely be based on a digital compass guided by European (constitutional) values. As stressed by the Commission's President, Ursula von der Leyen: "We embrace new technologies. But we stand by our values."[91]

The Artificial Intelligence Act is a critical part of this framework. The objective is not only to promote the development of artificial intelligence technologies in Europe to foster the development of the internal market but also to protect European values.[92] This approach aims to avoid the misuse of technologies that produce risks for public interests and rights that would "contradict Union values of respect for human dignity, freedom, equality, democracy and the rule of law and Union fundamental rights, including the right to non-discrimination, data protection and privacy and the rights

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[88] *See generally Proposal for a Regulation of the European Parliament and of the Council on a Single Market for Digital Services (Digital Services Act) and amending Directive*, COM (2020) 825 final (Dec. 15, 2020).

[89] *European Declaration on Digital Rights and Principles for the Digital Decade*, at 1, COM (2022) 28 final (Jan. 26, 2022).

[90] De Gregorio, *supra* note 18, at 1–2.

[91] European Commission Press Release, President von der Leyen"s speech at the high-level opening session of the 2021 Digital Assembly, "Leading the Digital Decade" (June 1, 2021), https://ec.europa.eu/commission/presscorner/detail/it/speech_21_2804.

[92] Luciano Floridi, *The European Legislation on AI: a Brief Analysis of its Philosophical Approach*, 34 PHIL. & TECH. 215, 216 (2021).

of the child."[93] This duality of goals is precisely the characterization of the European approach at the intersection between digital humanism and digital capitalism.

The Artificial Intelligence Act provides a first, even if not perfect,[94] approach to address the constitutional questions raised by the normative power of artificial intelligence systems. It introduces layers of risks that limit the possibility to implement certain artificial intelligence systems that are considered "unacceptable" and requires providers of these technologies to introduce procedural safeguards for systems that are "high risk" and "low risk." These layers are defined from the top by the European Commission, thus limiting the flexibility of this legal instrument. The list of "unacceptable," and therefore prohibited, artificial intelligence systems or even high-risk systems is directly set by the law and is independent of any a posteriori risk assessment by providers or users of those systems.

Even if this approach is rooted in the protection of European values,[95] it could not ensure enough flexibility in the long run, and it also increases legal uncertainty, thus depowering the repositioning of the rule of law in the digital age, as underlined by generative applications such as ChatGPT. The risk-based approach can be complemented by tightening public and private actors through coregulation. The possibility to find common goals and reach a compromise is another possibility for the rule of law to count in shaping the regulation of artificial intelligence. This approach can also contribute to ensuring that constitutional values are considered in the underpinning rules defining these systems while also ensuring that private actors have margins of discretion in implementing these technologies by following a certain constitutional frame.

Nonetheless, the challenges for the rule of law are not only resulting from the structure of the Artificial Intelligence Act but also from interrelation with other legal instruments, particularly the General Data Protection Regulation (GDPR). For instance, the obligation of data controllers to conduct data protection impact assessment in certain cases tends to overlap with risk management systems for high-risk artificial intelligence technologies.[96] This situation primarily comes from the

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[93] Artificial Intelligence Act, *supra* note 17, at 21.

[94] Michael Veale & Frederik Zuiderveen Borgesius, *Demystifying the Draft EU Artificial Intelligence Act*, 4 COMPUT. L. REV. INT'L 97, 97–98 (2021); Vera Lúcia Raposo, *Ex Machina: Preliminary Critical Assessment of the European Draft Act on Artificial Intelligence*, 30 INT'L. J.L. INFO. TECH. 88 (2022); LILIAN EDWARDS, REGULATING AI IN EUROPE. FOUR PROBLEMS AND FOUR SOLUTIONS 2–3 (2022).

[95] Artificial Intelligence Act, *supra* note 17.

[96] *Id*. at 2.

intimate connection between (personal) data and artificial intelligence technologies. Likewise, the Digital Services Act requires very large online platforms to conduct risk assessment in the process of content moderation,[97] which leads to an assessment about the impact of artificial intelligence technologies implemented to tackle harmful content.

Furthermore, the Artificial Intelligence Act fails to deliver remedies to mitigate the consolidation of the rule of tech regarding the impact of automated decision-making outcomes. This legal instrument does not focus on empowering individuals by providing remedies against the impact of automated decision-making. Even if European values play the role of guiding the interpretation of the Artificial Intelligence Act, they do not fully permeate in the top-down classification of risks defined by the Commission based on different artificial intelligence technologies. Unlike the approach followed in the GDPR or the Digital Services Act, the Artificial Intelligence Act provides a top-down approach where public actors define norms that shape the possibility to implement artificial intelligence technologies. It does not leave space for redress and judicial remedies against the impact of artificial intelligence systems. Rather than introducing remedies to protect European values, such as dignity, the Artificial Intelligence Act looks at these technologies more as products than as a process of decision-making expressing a normative power that could affect fundamental rights and democratic values.

The lack of remedies in the Artificial Intelligence Act can also be understood by considering this legal instrument as a form of protection of European values against the expansion of technological delegation by external actors. Rather than providing remedies, the EU aims to provide legal standards for artificial intelligence that clarifies typologies of these technologies that are aligned with European values. In other words, the EU tends to expand the rule of law to reduce the consolidation of the rule of tech beyond Europe. The EU has already shown its ability to influence global dynamics, and scholars have referred to such attitude as the "Brussels effect."[98] The EU is increasingly aware of its ability to extend its "regulatory soft power" by influencing the policy of other areas of the world in the field of new technologies. The

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[97] Digital Services Act, *supra* note 81, at 32.

[98] ANU BRADFORD, THE BRUSSELS EFFECT: HOW THE EUROPEAN UNION RULES THE WORLD xiv–xv (2020); *See also* Joanna Scott, *Extraterritoriality and Territorial Extension in EU Law*, 62 AM. J. COMPAR. L. 87, 88 (2018).

EU has also started to build its narrative about digital sovereignty.[99] As underlined by the Commission, "European technological sovereignty starts from ensuring the integrity and resilience of our data infrastructure, networks and communications" aimed to mitigate "dependency on other parts of the globe for the most crucial technologies."[100] This understanding does not entail closing European boundaries to a form of constitutional protectionism but ensuring Europe's ability to define its own rules and values in the digital age.

The EU strategy is an example of the critical role of the rule of law in limiting the expansion of the rule of tech. The consolidation of the normative powers of artificial intelligence leads constitutional democracies to design safeguards and remedies to address the exercise of unaccountable powers and limit the impact of these systems on fundamental rights and democratic values. While the Artificial Intelligence Act defines a critical step, and reaction, against the consolidation of the rule of tech, it recognizes that certain decisions cannot be left to the complete discretion of artificial intelligence and introduces layers of risks that trigger procedural safeguards.[101] This European approach underlines a critical paradigm shift from neoliberal approaches and techno-deterministic promises to a democratic strategy that aims to expand the role of the rule of law over other technological standards.

6. Conclusions

The consolidation of the algorithmic society is primarily connected to an increasing delegation of decision-making to artificial intelligence system. Algorithmic technologies increasingly mediate rights and powers, thus challenging the role of the rule of law in the digital age. These systems are no longer closed in laboratory or research institutions but are implemented to make decisions that affect fundamental rights and democratic values.

However, artificial intelligence technologies do not only raise questions about their impact on constitutional values but also about their power to self-generate norms that escape public and private oversight. The normative power of artificial intelligence

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[99] *See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 'Shaping Europe's digital future'*, at 2, COM(2020), 67 final (2020).
[100] *Id.*
[101] Artificial Intelligence Act, *supra* note 17, at 46–47.

defines another generative system of norms that meets and competes with other sources, primarily the rule of law. Therefore, code not only plays the role of the law, but it is also a source of law. The expansion of the rule of tech defines another example of how the rule of law is not only connected to a certain territorial dimension but also to multiple spaces that shape each other in a process of mutual influence.

The rule of tech does not develop its norms in an isolated framework but in a system of competing normativities that shape how artificial intelligence systems are designed and implemented over time. The main concerns come from the opacity of this normative layer and the limit of oversight. If these technologies will increasingly develop autonomous norms that affect daily lives, the question for constitutional democracies remains how to ensure that the rule of law has enough spaces to protect constitutional values. Therefore, the challenge for constitutional democracies is how to limit the marginalization of the rule of law as driven by the consolidation of the rule of tech in the digital age.

The position of the rule of law in the algorithmic society is critical to mitigate the challenges raised by the normative power of artificial intelligence technologies. Regulation can play a critical role in expanding the role of the rule of law, thus limiting the delegation to automated decision-making systems, particularly in cases which intimately touch upon constitutional rights and democratic values. Among the different solutions, including the implementation of artificial intelligence systems to inject more checks and balances within automated decision-making or the participation of more stakeholders in the phase of design and monitoring, the introduction of procedural safeguards and remedies can provide a first answer to limit the challenges raised by the rule of tech.

The launch of the Artificial Intelligence Act is a way to deal with the marginalization of the rule of law. By relying on a risk-based approach, this legal instrument recognizes that algorithmic systems cannot be implemented in any case, thus limiting technological delegation. Even if the Artificial Intelligence Act fails to provide a flexible framework and remedies against the impact of different applications, it defines a first step to address the expansion of the rule of tech, not only from a European internal dimension but also with regard to external forms of delegation by other areas on a global scale that would affect the protection of European values.

The normative power of artificial intelligence raises questions for digital constitutionalism to address the exercise of unaccountable powers. The questions

raised by the rule of tech are intimately constitutional and require to considering how far the rule of law can tolerate the expansion of unaccountable forms of powers in the algorithmic society.