Legislatures and Legislation in the Age of Artificial Intelligence

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Abstract: This article introduces the issue of legislatures and legislation in the age of artificial intelligence (AI). It begins with an explanation of what AI is and why it is not easy to define, and what is meant by "the age of AI." It then explores legislators' attention to the age of AI and to the need for legislative response, presenting data on the dramatic recent growth in parliamentary attention. It next discusses the role of legislatures in regulating AI, and the role of legislation compared to other regulatory instruments. Finally, it discusses the introduction of AI into the operation of legislatures and into lawmaking, presenting use cases and guidelines for proper AI adoption.

Keywords: artificial intelligence, AI, defining AI, age of AI, legislatures, parliaments, digital parliament, legislation, lawmaking, regulating AI, AI Act, guidelines for AI in parliaments

Introduction

In recent years, there is growing awareness that we are entering (and some argue that we have already entered) the age of artificial intelligence (AI).[2] This has led to burgeoning discussions in various fields about the transformative effects of AI on these fields,[3] including a wave of legal scholarship about AI in law.[4] Yet, the subject of AI in legislatures remained underexplored.[5] This special issue turns attention to the role of legislatures and legislation in the age of AI. It explores two main sets of questions. The first is what is the role of legislatures in regulating AI, and whether and how legislation can be the appropriate regulatory tool or

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[2] See section 2 below.

[3] For some examples out of many, see Max Tegmark, *Life 3.0: Being human in the age of artificial intelligence* (Alfred A. Knopf 2017); Paul R. Daugherty and H. James Wilson *Human+ Machine, Updated and Expanded: Reimagining Work in the Age of AI* (Harvard Business Press 2024); '*Science and the new age of AI: a Nature special'* <https://www.nature.com/articles/d41586-023-03017-2> (Updated 6 December 2023).

[4] Catalina Goanta, Gijs van Dijck and Gerasimos Spanakis, 'Back to the Future: Waves of Legal Scholarship on Artificial Intelligence' in Sofia Ranchordás and Yaniv Roznai (eds), *Time, Law and Change* (Hart 2020); FJ Bex, 'AI, Law and beyond. A transdisciplinary ecosystem for the future of AI & Law' (2025) 33 Artif Intell & Law 253–270; Frank Fagan, 'A view of how language models will transform law' (2024) 92 Tenn L Rev 1.

[5] Monica Palmirani and others, Report on AI in Parliamentary Context (University of Bologna 2024) 25 (observing that "legal research on these issues remains very limited"). See also, Annemarie Drahmann and Anne Meuwese, 'AI and Lawmaking: An Overview' in B Custers and E Fosch-Villaronga (eds), *Law and Artificial Intelligence* (TMC Asser Press 2022) (observing that AI in the legal domain has been widely discussed in scholarship whereas AI in lawmaking and parliamentary procedures is a relatively unexplored field).

policy response for dealing with the risks, challenges and opportunities of AI. The second set of questions is how AI would transform legislatures themselves, and what role could (or *should*) AI play in the operation of legislatures.

In this introductory article, I introduce these two questions and the papers in this special issue. As some readers of this issue might lack a background in the field of AI, Section 1 begins with a brief explanation of what is AI and why it is not easy to define. Section 2 explains what is meant by "the age of AI." Section 3 discusses legislators' attention to the age of AI and to the need for legislative response, presenting data on the dramatic recent growth in parliamentary attention. Section 4 discusses the issue of legislation for regulating AI. It focuses on the role of legislation (such as the EU AI Act) vis-à-vis other regulatory instruments, placing the discussion within broader questions of legislation and regulation theory. Finally, Section 5 discusses the introduction of AI into the operation of legislatures and into lawmaking. It discusses the extent of current parliamentary use of AI and its expected growth, use cases of AI in lawmaking, potential benefits and risks, and guidelines for proper integration of AI in parliaments.

6. What is Artificial Intelligence? The Challenges of Defining AI

While it seems that everyone is talking about "Artificial Intelligence" or "AI", there is often significant confusion regarding what AI is (and what it is not).[6] AI is one of those hard-to-define "I *hope* I know it when I see it" concepts. As Araszkiewicz and Florczak-Wątor observe in their contribution to this special issue: "The concept of artificial intelligence is inherently contentious... AI lacks a single, universally accepted definition, and its scope often varies depending on the context of its application."[7]

Indeed, there are a host of definitions out there, with variations between how AI is defined and understood in popular use or general dictionaries; by AI researchers and practitioners; in legal definitions; in philosophical and ethical discussions, and so forth.[8] And even within each of these groups, there is a diversity of definitions.[9] And indeed, a common theme in discussions about the definition of AI is that "[t]he definition of 'Artificial Intelligence' is not easy and remains contested,"[10] that "Artificial Intelligence (AI) is notoriously hard to define,"[11] and that "the definition of AI itself is volatile and has changed over time."[12]

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[6] Daniel Martin Katz, 'AI + Law: An Overview' in Daniel Martin Katz, Michael J Bommarito and Ron Dolin (eds), *Legal Informatics* (Cambridge University Press 2021).

[7] Michał Araszkiewicz and Monika Florczak-Wątor, 'AI and the Principles of Proper Legislation: Enhancing Quality, Understandability, and Consistency in Legal Texts' (2025) TPLeg 1, 16.

[8] See and compare, for example: ibid ; Stuart J Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (4th edn, Pearson 2021); Wannes Meert, Tinne De Laet and Luc De Raedt, 'Artificial Intelligence: A Perspective from the Field' in Nathalie A Smuha (ed), *The Cambridge Handbook of the Law, Ethics and Policy of Artificial Intelligence* (Cambridge University Press 2025); Vincent C Müller,'Philosophy of AI: A structured overview' in Nathalie A Smuha (ed), Cambridge Handbook on the Law, Ethics and Policy of Artificial Intelligence (Cambridge University Press 2025).

[9] ibid.

[10] Nicolas Miailhe and Cyrus Hodes , ' The third age of artificial intelligence' (2017) *Field Actions Science Reports* 17 .

[11] Tom Melham, 'Generative AI: An Introduction' in Mimi Zou, Cristina Poncibò, Martin Ebers and Ryan Calo (eds), *The Cambridge Handbook of Generative AI and the Law* (Cambridge University Press 2025).

[12] Christoph Bartneck, Christoph Lütge and Alan Wiseman, 'What Is AI?' in *An Introduction to Ethics in Robotics and AI* (Springer 2020).

Part of the problem in defining AI is that there is a large variety of complicated technologies and techniques that can fall under the umbrella of AI (and that the question of which of them indeed falls under the field of AI is controversial and debated among AI experts). Another part of the problem is that these technologies and techniques are ever-evolving at a rapidly growing pace, while new, sometimes-unpredicted technologies emerge. The tasks, functions, and uses of AI and the scope of its use and applications are also rapidly evolving. Hence, defining AI is defining a constantly moving target.[13] Another problem in defining AI is that it often calls for difficult questions of what is "intelligence", what is "artificial" intelligence, how is it different from human intelligence, or whether it is even helpful or just confounding to try to think of AI in relation to human intelligence.[14]

For some purposes, there are advantages to not trying to solve these definitional problems of AI. Indeed, leading AI experts have opined that "the lack of a precise, universally accepted definition of AI probably has helped the field to grow, blossom, and advance at an ever-accelerating pace. Practitioners, researchers, and developers of AI are instead guided by a rough sense of direction and an imperative to 'get on with it.'"[15]

Moreover, for many purposes, we can simply adopt a nonbinding working-definition that bypasses the need to solve these problems. For example, the authors of the 2021 Study Panel Report of the Stanford AI100 project simply suggested: "artificial intelligence is about getting a machine to carry out behaviors that we think of as requiring intelligence."[16]

Answering these definitional questions might also not be too crucial for the purposes of legislators, parliamentary staff and drafters having to integrate and employ AI tools in their everyday work. For such purposes, it is probably more useful to have some working definition that is non-technical and accessible for those without expertise in the field of AI. A good example is the recent *Guidelines for AI in Parliaments*,[17] discussed in Fitsilis, von Lucke & De Vrieze's contribution to this special issue.[18] The guidelines' section dealing with explaining what is AI begins by noting that the "field of AI is complex and ever-changing and many attempts have been made to describe it."[19] Therefore, the guidelines explain that, rather than offering concise definitions, they adopt an approach of providing a set of more general descriptions and examples, just to frame the discussion about the introduction of AI in parliaments.[20] The *Guidelines* then provide the following working definition: "The term artificial intelligence refers to a bundle of different technologies, learning methods, system architectures, algorithms, and approaches that use computer capacities to replicate the capabilities of human intelligence in order to perform certain tasks independently or on command."[21]

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[13] Araszkiewicz and Florczak-Wątor (n 7) 16–18.
[14] Müller (n 8). See also Peter Stone and others, Artificial Intelligence and Life in 2030: One Hundred Year Study on Artificial Intelligence: Report of the 2015–2016 Study Panel (Stanford University 2016) 12–17.
[15] Stone ibid 12.
[16] Michael L Littman and others, Gathering Strength, Gathering Storms: The One Hundred Year Study on Artificial Intelligence (AI100) 2021 Study Panel Report (Stanford University 2021).
[17] Fotios Fitsilis and others, 'Guidelines for AI in Parliaments' (Westminster Foundation for Democracy 2024).
[18] Fotios Fitsilis, Jörn von Lucke and Franklin De Vrieze, 'Inception, Development and Evolution of Guidelines for AI in Parliaments' (2025) TPLeg 1.
[19] Fitsilis and others, *'Guidelines for AI'* (n 17) 12.
[20] Ibid.
[21] Ibid.

In contrast, for legislatures and regulators seeking to regulate AI, these definition problems could be, well, a real problem. As Presno Linera and Meuwese argue in their contribution to this special issue: "The many versions of a definition of AI that have been proposed throughout the legislative history of the AI Act reflect the difficulty of offering a 'definite' definition of AI, especially for legal purposes."[22] Moreover, as Greenstein and Zamboni argue in their contribution to this special issue, this legislative history provides an illuminating example of the challenges in regulating emerging technologies such as AI.[23] The futility of the original idea of enumerating the AI techniques covered by the regulation (even if in an amendable Annex) was proven by the fact that the original proposal by the European Commission failed to mention generative AI, simply because it was "not yet on the radar of EU policymakers."[24] However, by the time the legislative process was concluded, generative AI (GenAI) was all that everyone was talking about (and using). Fortunately, the EU regulators dodged that bullet, because the European Parliament rejected the idea of an amendable Annex, which purports to exhaustively enumerate the AI techniques covered by the regulation.[25]

Instead, the EU AI Act,[26] ultimately adopted the following definition: "a machine-based system designed to operate with varying levels of autonomy, that may exhibit adaptiveness after deployment and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments."[27] This definition is in harmony with similar definitions in international regulatory instruments, such as the updated OECD definition,[28] and the Framework Convention on Artificial Intelligence's definition.[29] As Presno Linera and Meuwese observe, this represents a deliberate effort to harmonize AI governance globally and to facilitate international cooperation.[30] This definition likewise aims to balance between the need to provide legal accuracy and certainty on one hand, and the need to allow for flexibility to accommodate future technological developments on the other.[31]

Still, the AI Act's solution is not perfect and is certainly subject to criticism. Araszkiewicz and Florczak-Wątor argue that "[w]hile this definition captures the broad functional scope of AI systems, it remains somewhat imprecise regarding the distinctions between different

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[22] Miguel Ángel, Presno Linera and Anne Meuwese 'Regulating AI from Europe: A Joint Analysis of the AI Act and the Framework Convention on AI' (2025) TPLeg 1.

[23] Stanley Greenstein and Mauro Zamboni 'Navigating the Legislative Dilemma: Evaluating the EU AI Act's Approach to Regulating Emerging Technologies' (2025) TPLeg 1

[24]   Nathalie A Smuha, 'An Introduction to the Law, Ethics, and Policy of Artificial Intelligence' in Nathalie A Smuha (ed), *The Cambridge Handbook of the Law, Ethics and Policy of Artificial Intelligence* (Cambridge University Press 2025) 2, 14.

[25] Presno Linera & Meuwese   (n 22)   .

[26] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence and amending Regulations (EC) No 300/2008,
(EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and
Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), OJ L,
2024/1689, July 12, 2024 (hereinafter: the AI Act).

[27]   Artificial Intelligence Act, art 3(1).

[28]   OECD, *Recommendation on Artificial Intelligence* (OECD/LEGAL/0449, 2019, as amended 2023); see also OECD, *Explanatory Memorandum on the Updated OECD Definition of an AI System* (OECD Publishing 2024) 4.

[29]   Council of Europe, *Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law* (CETS No 225).

[30] Presno Linera & Meuwese (n 22).

[31] ibid.

computational methodologies," (such as the classic distinction between computational intelligence and symbolic AI).[32] Presno Linera and Meuwese question the extent that the AI Act's definition provides accuracy and certainty, and argue that it will require further interpretation and clarification.[33] Greenstein and Zamboni, in turn, are skeptical of its ability to accommodate future technological developments, and are critical of its regulatory approach (as will be elaborated in section 4).[34]

Finally, after writing this section in the old-fashioned way of doing research and writing, without the aid of AI, I thought it fitting to give the most popular AI tool an opportunity to try its hand at suggesting a definition.[35] I asked the recently released ChatGPT 5.0 for a working definition of AI for the purpose of an academic discussion of legislatures and AI, which will synthesize definitions from dictionary definitions, AI expert definitions, and legal definitions, from the past ten years.[36] ChatGPT suggested the following definition: "Artificial Intelligence can be defined as the ability of a machine or software system to perform tasks that normally require human intelligence. In other words, an AI system is one that can perceive its environment, process and interpret data, learn or adapt from experience, and make decisions or take actions to achieve specific goals."

7. The Age of Artificial Intelligence

Dedicating a special issue to "Legislatures and Legislation in the Age of Artificial Intelligence," also calls for a brief explanation about what is meant by "the age of AI." To be sure, AI is not a new phenomenon. The field of AI has existed at least since the mid-1950s.[37] Yet, since the 2010s (and even more so, since the 2020s), we see a leap, a qualitative change, which could be described as a new era.[38] This new era is characterized by dramatic and rapid advances in AI capabilities, including, inter alia, deep-learning breakthroughs and developments from diagnostic and predictive AI to generative AI.[39] These advances were aided

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[32] Araszkiewicz & Florczak-Wątor (n 7). As they explain, "Computational intelligence encompasses techniques such as neural networks – including the complex architectures backing the large language models, evolutionary computing, and other techniques such as for example support vector machines, which rely on data-driven statistical learning… [S]ymbolic AI employs rule-based reasoning, knowledge graphs, and formal logic systems. It prioritises structured knowledge representation, interpretability, and consistency with predefined logical rules." They note that computational intelligence methods excel in pattern recognition, adaptability, and robustness but often lack transparency and explainability, whereas symbolic AI can struggle with adaptability and scalability when dealing with complex, real-world data.

[33] Presno Linera & Meuwese (n 22).

[34] Greenstein & Zamboni (n 23). A deeper discussion on possible regulatory solutions to the definitional challenges of AI is beyond the scope of this article. It is worth briefly mentioning, however, ideas such as moving from what AI is to what it does; refocusing on harms/benefits rather than on a technological definition; or discussing AI not as a machine/technology but as a structure of society, politics, and economics (which includes thinking more about human-AI interaction, political and economic dimensions, AI ethics, etc.). I thank Ella Corren for sharing these ideas with me.

[35] Fabio Duarte, 'Number of ChatGPT Users (November 2025)' Exploding Topics https://explodingtopics.com/blog/chatgpt-users accessed 6 November 2025.

[36] Obviously, my prompt was more elaborate, but this represents the gist of the instructions I gave.

[37] The workshop at the Dartmouth Summer Research Project on Artificial Intelligence organized by John McCarthy and others in 1956 is often considered as the "official" birth of the field of AI. Yet, its origins are even earlier. See, Petar Radanliev, 'Artificial Intelligence: Reflecting on the Past and Looking towards the Next Paradigm Shift' (2024) 37(7) J Experimental & Theoretical Artificial Intelligence 1045.

[38] ibid, see also Longbing Cao, 'A New Age of AI: Features and Futures' (2022) 37(1) IEEE Intelligent Systems 25.

[39] Radanliev (n 37)   ; see also, Okyay Kaynak, 'The Golden Age of Artificial Intelligence: Inaugural Editorial' (2021) 1(1) Discover Artificial Intelligence 1.

by emerging massive computing power and immense data sets, as well as a boom in investment and interest in AI.[40] This new era is additionally characterized by the rapid and pervasive integration of AI across multiple sectors, with applications that touch ever-growing facets of people's lives.[41] These developments were propelled, inter alia, by AI becoming more efficient, affordable, and accessible.[42] Indeed, since the public release of generative AI tools, particularly the release of ChatGPT in November 2022, the pace of AI adoption has been breathtaking; much faster than the adoption of prior modern technologies such as the PC and the internet.[43] The combination of these factors – the leap in AI capabilities and AI's rapid and ubiquitous adoption – and consequently, AI's transformative impact and far reaching societal implications, are the basis for arguing that we have entered a new age of AI.

And indeed, many leading observers argue that the age of AI is already here, and akin its transformative potential to past transformative inventions. For example, Andrew Ng has famously claimed that "AI is the New Electricity," opining that "[j]ust as electricity transformed almost everything 100 years ago, today I actually have a hard time thinking of an industry that I don't think AI will transform in the next several years."[44] Bill Gates likewise proclaimed that "[t]he Age of AI has begun," opining that "[t]he development of AI is as fundamental as the creation of the microprocessor, the personal computer, the Internet, and the mobile phone. It will change the way people work, learn, travel, get health care, and communicate with each other. Entire industries will reorient around it. Businesses will distinguish themselves by how well they use it."[45]

Admittedly, there are also more skeptical voices, questioning the AI hype.[46] Others claim that a real transformative age of AI would only begin following further future developments, such as Artificial General Intelligence (AGI), "strong" AI, or superintelligence.[47] It is also worth mentioning that previous optimistic reports about AI becoming more efficient, affordable, and accessible are recently facing skepticism, noting the rising development costs,[48] which, together with resource demands and market concentration, limit competition and therefore could limit innovation, affordability and accessibility.[49] No less important, there is growing

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[40] ibid ; Nestor Maslej and others, 'The 2025 AI Index Report' (Stanford University, April 2025) <https://hai.stanford.edu/ai-index/2025-ai-index-report> accessed 9 November 2025.
[41]   Littman and others (n 16).
[42] Nestor Maslej and others (n 40).

[43] Alexander Bick, Adam Blandin and David J Deming, 'The Rapid Adoption of Generative AI' (revised February 2025) NBER Working Paper No 32966 <https://www.nber.org/system/files/working_papers/w32966/w32966.pdf> accessed 7 November 2025.
[44] Shana Lynch, 'Andrew Ng: Why AI Is the New Electricity' (Stanford Graduate School of Business, 11 March 2017) <https://www.gsb.stanford.edu/insights/andrew-ng-why-ai-new-electricity> accessed 7 November 2025.
[45] Bill Gates, 'The Age of AI has Begun' (GatesNotes, 21 March 2023) <https://www.gatesnotes.com/The-Age-of-AI-Has-Begun> accessed 7 November 2025.
[46] Smuha (n 27); Haritha Khandabattu, 'The 2025 Hype Cycle for Artificial Intelligence Goes Beyond GenAI' (Gartner, 8 July 2025) <https://www.gartner.com/en/articles/hype-cycle-for-artificial-intelligence> accessed 7 November 2025.
[47] Miailhe, and Hodes (n 10).
[48] Ben Cottierand others 'The rising costs of training frontier AI models' arXiv preprint arXiv:2405.21015 (2024).
[49] Victor Holmin 'The Impact of AI's Rising Costs: What It Means for Innovation and Strategy' Medium < https://medium.com/techonomics-innovation-and-cyber-contemplations/the-impact-of-ais-rising-costs-what-it-means-for-innovation-and-strategy-6ca0a78934f5 > (5 December 2024) accessed 12 November 2025.

criticism of the environmental costs of the massive usage of computing power and resources needed to fuel AI applications.[50]

Notwithstanding these disagreements on whether the AI age is already here and on the future developments of AI, experts generally agree that even the current advances in AI "bring about serious consequences, generating new opportunities, new risks, and new challenges," which, in turn, would be amplified "by—at least—an order of magnitude" with the introduction of AGI.[51]

Finally, and most relevant for our purposes, recognition of the age of AI is rapidly entering the cognizance and work of legislatures. While the EU legislature led the way with its landmark AI Act,[52] legislatures across the globe are increasingly acknowledging that they must respond to the age of AI. As a legislator from the US Congress recently observed during a committee hearing about the federal government in the age of AI: "I think we are all aware that the age of AI is here and expansion is absolute and unstoppable."[53] The need to "better prepare… for AI security risks, while making sure that our statute book is ready for the age of AI and its undoubted opportunities" was likewise acknowledged in parliamentary debates about consultations on AI legislation in the UK House of Lords;[54] arguably the most traditionalist legislative institution.[55] These, of course, are but two representative illustrations. The next section will provide more extensive quantitative data on legislators' growing attention to AI and the need for legislative response.

8. Parliamentary Attention to the Age of AI and to the Need for Legislative Response

There are multiple indications that parliamentary attention to AI has dramatically grown in the past decade. One illustrative example is the growth in mentions of AI in committee reports in the US Congress since 2015. In the 118th congressional session (2023-24) alone, there were 136 mentions in committee reports, an increase of 83.8 percent from the previous session.[56] Figure 1, adapted from the Stanford AI Index report 2025,[57] demonstrates this growing legislative attention.

Figure 1: AI mentions in U.S. Committee Reports (114th–118th Congresses)

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[50] Federica Lucivero 'AI and environmental sustainability' In *Handbook on public policy and Artificial Intelligence*, pp. 158-169. Edward Elgar Publishing, 2024.

[51] Miailhe, and Hodes (n 10).

[52] European Parliament, 'EU AI Act: First Regulation on Artificial Intelligence' (last updated 19 February 2025)<https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artific ial-intelligence> accessed 21 October 2025.
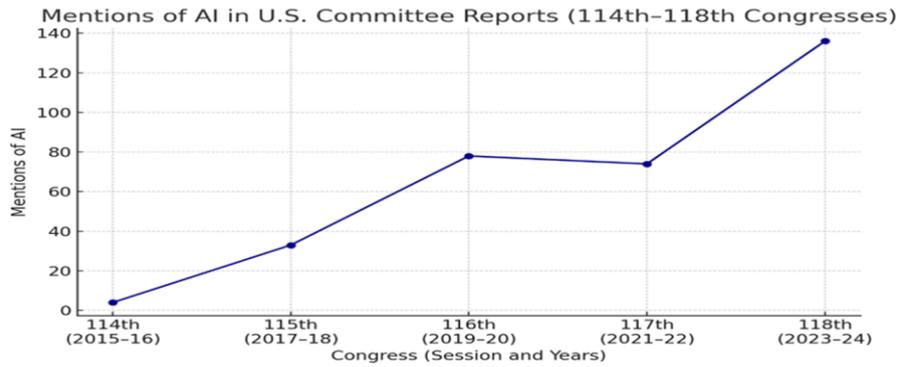
[53] U.S. House of Representatives Committee On Oversight and Government Reform, 'Hearing on the Federal Government in the Age of Artificial Intelligence' (5 June 2025)(Eli Crane's statement) 65 <https://www.congress.gov/119/meeting/house/118339/documents/HHRG-119-GO00-Transcript-20250605.pdf> accessed 7 November 2025.

[54] HL Deb 21 July 2025<https://hansard.parliament.uk/lords/2025-07-21/debates/994DAD58-D8D8-49ED-AF15-F9BA5493EC6A/ArtificialIntelligenceLegislation> accessed 7 November 2025.

[55] Ittai Bar-Siman-Tov (2020) 'Covid-19 meets politics: the novel coronavirus as a novel challenge for legislatures', The Theory and Practice of Legislation, 8:1-2, 11, 17-18.

[56] Nestor Maslej and others (n 40).

[57] ibid.

The US is not alone in the growing parliamentary attention to AI. The 2025 AI Index Report also analyzed the minutes of legislative debates of parliaments in 75 territories,[58] counting the number of legislative proceedings that contain the keyword "artificial intelligence." It found that the total number of proceedings mentioning AI has grown more than ninefold from 2016 to 2024 (including 1,889 in 2024 alone, showing an increase of 21.3 percent from the previous year). Figure 2 depicts this dramatic growth.

Figure 2: Number of legislative proceedings mentioning AI in 75 select geographic areas (2016–24)
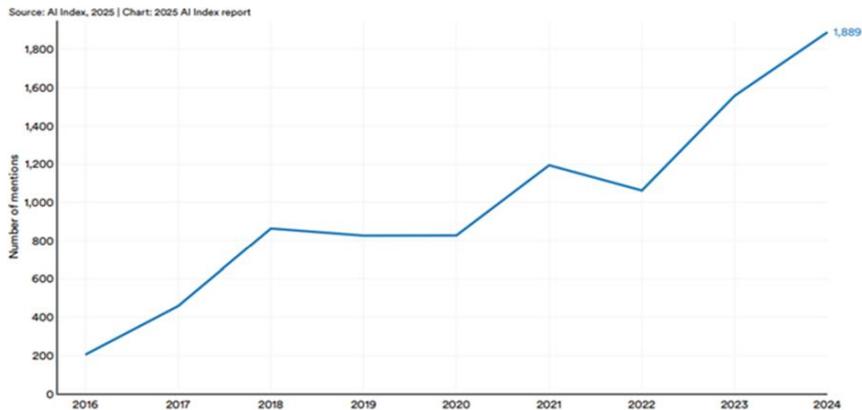
In addition to growing attention to AI, there is growing parliamentary awareness of the need for legislatures to respond to AI and adopt AI policies. Indeed, the Inter-Parliamentary Union's "Parliamentary actions on AI policy" Report documented a range of parliamentary actions on AI policy in the national parliaments of no less than 50 countries (as of August 2025).[59] The IPU's report focused on parliamentary actions such as legislative reviews, reports, resolutions, inquiries, working groups and policy discussions.[60]

In an even more direct manifestation of legislative action on AI policy, legislatures are also increasingly proposing bills and enacting legislation on issues relating to AI. In the case of the US Congress, the rise in legislative attention is mostly limited to a dramatic growth in the number of bills proposed (including 221 bills proposed in 2024 alone), while the passage of

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[58] 73 countries+ Macao and Hong Kong. see ibid for further details.
[59] Inter-Parliamentary Union, 'Parliamentary Actions for AI Policy' (last updated 25 October 2025) <https://www.ipu.org/impact/democracy-and-strong-parliaments/artificial-intelligence/parliamentary-actions-ai-policy> accessed 9 November 2025.
[60] ibid.

legislation is lagging far behind.[61] In the American State legislatures, in contrast, a dramatic rise in legislative action dealing with AI is also evidenced by the number of enacted laws: from one law enacted in 2016 to 131 laws enacted in 2024 alone.[62] And according to the National Conference of State Legislatures (NCSL), this trend continues during the 2025 legislative session. NCSL reports that "all 50 states, Puerto Rico, the Virgin Islands, and Washington, D.C., have introduced legislation on this topic this year." It further reports that during the 2025 legislative session, as of July 2025, 38 states have already enacted AI-related legislation, with around 100 laws already adopted.[63] A similar growth in legislative action is also evidenced in other countries. Between 2016 and 2024, parliaments in 39 out of 114 surveyed countries have enacted at least one AI-related law. Together, these 39 countries enacted a total of 204 AI-related laws, most of which were enacted in the past five years (including 40 laws in 2024 alone).[64]

In sum, legislatures around the world are paying growing attention to AI and are increasingly developing or contemplating responses to AI. The next section would therefore turn to the role of legislation in regulating AI, and its place vis-à-vis other regulatory instruments.

9. Regulating AI: The Role of Legislation vis-à-vis other Regulatory Instruments

As noted in the previous section, many national parliaments are currently devising or considering laws for regulating AI. Two main regulatory models have taken shape worldwide. The first is a sector-specific approach, in which regulatory rules and legal standards are developed separately within individual fields such as healthcare, transportation, data protection, etc. The second is a comprehensive, cross-sector framework that applies uniformly across industries, best illustrated by the EU's AI Act.[65] Indeed, to date, the landmark and most comprehensive legislative response, which serves as the leading case study for legislative regulation of AI, is the EU AI Act enacted in 2024.[66]

Moreover, it is important to bear in mind that legislative responses occur in addition to the growth of sub-statutory regulations dealing with AI,[67] and growing attention to AI-policy by supranational and international bodies.[68] Thus, for example, while the EU's AI Act is the regulatory instrument that received the most attention, less attention was given to another important policy instrument, which was adopted under the auspices of the Council of Europe

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[61] Nestor Maslej and others (n 40) 340.
[62] ibid 342.
[63] National Conference of State Legislatures, 'Artificial Intelligence 2025 Legislation' (10 July 2025) <https://www.ncsl.org/technology-and-communication/artificial-intelligence-2025-legislation> accessed 9 November 2025.
[64] Nestor Maslej and others (n 40) 337.
[65] For a good source for substantive comparisons between the EU approach to other legislative responses, with particular emphasis on non-EU countries with leading AI industries, see AI Policy Observatory <https://aipolicy.ius.uzh.ch/> accessed 9 November 2025.
[66] Nathalie A. Smuha and Karen Yeung, 'The European Union's AI Act: Beyond Motherhood and Apple Pie?' in Nathalie A. Smuha (ed), *The Cambridge Handbook of the Law, Ethics and Policy of Artificial Intelligence* (CUP 2025).
[67] Nestor Maslej and others (n 40) 350-352.
[68] ibid 192.

roughly at the same time: the Framework Convention on Artificial Intelligence, Human Rights, Democracy and the Rule of Law.[69]

In their contribution to this special issue, "Regulating AI from Europe: a joint analysis of the AI Act and the Framework Convention on AI,"[70] Miguel Ángel Presno Linera and Anne Meuwese, present a first comparison of these two instruments. They highlight common principles within these two instruments, summarize their history, and situate their adoption in the context of other international initiatives and agreements on the regulation of AI, such as the OECD Principles on Artificial Intelligence[71] or the Bletchley Declaration.[72]

In their comparative analysis of the two European instruments, Presno Linera and Meuwese focus on three axes: the need to define AI for regulatory purposes; the choice for a risk-based approach and its meaning; and the structure of the overall regulatory regime. They also question "whether these instruments will act in competition with one another or as mutual catalysts for the 'European approach' to the regulation of AI," and discuss the potential "Brussels effect"[73] (or "Strasbourg effect") of the two regulatory instruments, separately and jointly.

Presno Linera and Meuwese have chosen a perfect case study, as Europe is a pioneer in regulating AI, and has explicitly sought to establish itself as the leading "global standard-setter" for AI regulation.[74] Hence, there is indeed great interest to see whether its policy would have a Brussels effect similarly to the GDPR. These questions also become particularly interesting and timely given recent reports that the EU is facing intense backlash and pressure from businesses and from Donald Trump's administration, and that the European Commission is currently considering watering down or delaying some of the AI Act's provisions.[75] Their article is also a particularly apt case study for exploring the role of legislation as a regulatory instrument, and its place vis-à-vis various other policy instruments. Hence, it makes an important contribution not only to the subject of regulating AI, but also to broader debates in the fields of legisprudence and regulation about the relationships between legislation and regulation.[76]

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[69] Council of Europe, *Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law*, CETS No. 225.

[70] Miguel Ángel Presno Linera and Anne Meuwese, 'Regulating AI from Europe: A Joint Analysis of the AI Act and the Framework Convention on AI' (2025) The Theory and Practice of Legislation 1.

[71] OECD, *Recommendation on Artificial Intelligence* (amended 3 May 2024) <https://legalinstruments.oecd.org/en/instruments/oecd-legal-0449> accessed 9 November 2025.

[72] UK Government, *The Bletchley Declaration by Countries Attending the AI Safety Summit, 1–2 November 2023* (13 February 2025) <https://www.gov.uk/government/publications/ai-safety-summit-2023-the-bletchley-declaration> accessed 9 November 2025.

[73] Anu Bradford, *The Brussels Effect: How the European Union Rules the World* (OUP 2020).

[74] European parliament, Presse Release: 'Artificial intelligence: MEPs want the EU to be a global standard-setter' (3 May 2022) <https://www.europarl.europa.eu/news/en/press-room/20220429IPR28228/artificial-intelligence-meps-want-the-eu-to-be-a-global-standard-setter> accessed 9 November 2025

[75] Center for AI and Digital Policy, 'CAIDP Update 7.41 - AI Policy News' (4 November 2025) <https://www.linkedin.com/posts/center-for-ai-and-digital-policy_caidp-update-741-ai-policy-news-nov-activity-7393663487438266370-txVt> accessed 9 November 2025; Jennifer Rankin 'EU could water down AI Act amid pressure from Trump and big tech' The Guardian (& November 2025) <https://www.theguardian.com/world/2025/nov/07/european-commission-ai-artificial-intelligence-act-trump-administration-tech-business> accessed 9 November 2025.

[76] Ittai Bar-Siman-Tov, 'Beyond Neglect and Disrespect: Legislatures in Legal Scholarship', in Cyril Benoît and Olivier Rozenberg (eds), *Handbook of Parliamentary Studies: Interdisciplinary Approaches to Legislatures* (Edward Elgar Publishing 2020) 141, 142; Nir Kosti, David Levi-Faur and Guy Mor, 'Legislation and Regulation: Three Analytical Distinctions' (2019) 7(3) TPLeg 169 ; WJM Voermans, 'Legislation and Regulation' in

Exploring the EU AI Act as a case study for regulating AI, as well as for broader questions in legislation and regulation theory, is also the central aim of the contribution by Stanley Greenstein and Mauro Zamboni: "Navigating the Legislative Dilemma: Evaluating the EU AI Act's Approach to Regulating Emerging Technologies."[77] Greenstein and Zamboni critically investigate how the AI Act tackles one of the deepest dilemmas in lawmaking, particularly in regulating emerging technologies. They note that, on one hand, legislation is conservative and static in nature: it relies on established principles, and on data from the past and the present, and is meant to provide stability. On the other hand, legislation is fundamentally forward-looking and is meant to guide future behavior: it needs to predict the future and try to shape the future, while providing flexibility, adaptability, and predictability. Similarly, legislation has a protective function: it needs to protect society against potential future risks. Yet, legislation is also a tool for progress: it needs to facilitate and encourage innovation and leverage its anticipated benefits. Greenstein and Zamboni argue that "the regulation of AI through legislation can be seen as a quintessential example, almost an ideal type" of these inherent tensions, given the nature of AI and its potential to evolve beyond human foresight. Hence, Greenstein and Zamboni's article contributes to broader discussions in the scholarship about regulating emerging technologies, such as discussions about the Collingridge Dilemma, the pacing problem and future-proofing legislation.[78]

Against this backdrop, the article aims to "sketch a preliminary blueprint for a regulatory architecture tailored to emerging technologies and especially AI." The article considers four legislative policy models: the statutory model (in which legislative bodies are the primary drivers of regulation, and regulation is created through detailed legislative provisions); the administrative model (where the legislature delegates the primary responsibility for creating regulatory regimes to the executive branch, particularly to public agencies); the judicial model (where the legislature leaves the primary burden to the judiciary to fill legislative gaps); and the outsourced model (where the legislature delegates the responsibility for creating and implementing a regulatory framework to private actors, such as by private standard-setting and self-regulation).

The article then presents the regulatory governance constructed by the AI Act and analyzes it by applying this four-model typology. Greenstein and Zamboni find that the AI Act employs a hybrid regulatory governance structure, incorporating statutory, administrative, and outsourced legislative policy models. They argue that this regulatory approach creates risks such as regulatory fragmentation, inconsistencies, legal uncertainty, and concerns over political accountability. Instead, they propose an administrative model, centered on a dedicated EU AI Agency, which will consolidate expertise, ensure procedural clarity, strengthen accountability, and balance regulatory adaptability with legal certainty.

10. AI in Parliaments and in Lawmaking

Ulrich Karpen and Helen Xanthaki (eds), *Legislation in Europe: A Comprehensive Guide for Scholars and Practitioners* (Bloomsbury Publishing 2017).

[77]   Greenstein & Zamboni (n 23).

[78] For a review of the scholarship on these discussions and the challenges of regulating new and emerging technologies, see Karen Yeung and Sofia Ranchordás, 'Technological Innovation' in *An Introduction to Law and Regulation: Text and Materials* (CUP 2024). See also Sofia Ranchordás 'Future-proofing legislation for the digital age' in Sofia Ranchordás and Yaniv Roznai (eds), *Time, Law and Change* (Hart 2020); Atte Ojanen 'Technology Neutrality as a Way to Future-Proof Regulation: The Case of the Artificial Intelligence Act' *European Journal of Risk Regulation*, 2025, 1–16. https://doi.org/10.1017/err.2025.10024.

10.1　　The Winter and Emerging Spring of AI in Parliaments

Compared to the rapid expansion of AI use in other governmental bodies and governance areas, and certainly compared to the private sector, the integration of AI in parliaments, and particularly in lawmaking, is still in its embryonic stage. As Fitsilis, von Lucke & De Vrieze observe in their contribution to this special issue, "the introduction and use of AI systems by parliaments remains largely a terra incognita, with traditional institutions like parliaments struggling to navigate this new technology landscape."[79]

At present, a handful of legislatures are already using AI.[80] A review of recent reports highlights examples of use cases, as well as their currently limited scope. PopVox's November 2024 report Comparing AI Adoption in the US Congress to Legislatures Worldwide, presents use cases from five countries and the EU.[81] The IPU January 2025 report of Use Cases of AI in Parliaments includes reports from eight countries and the EU.[82] Fitsilis and de Almeida's global survey, published in 2024, found nine legislatures with actual implementation of AI solutions.[83] Palmirani et al.'s report from December 2024 found that 14 countries and the EU are already using AI in their parliamentary activities.[84] Moreover, they report that among the legislatures that already use AI, all documented uses are purely assistive and tend to relate to specific, secondary tasks (such as transcribing parliamentary proceedings or summarizing documents).[85]

Indeed, the IPU World e-parliament Report 2024 similarly reveals that AI adoption in parliaments "is still in its early stages," with "notable hesitancy in adopting AI for core legislative functions."[86] Based on survey responses from 115 parliaments or chambers in 86 countries and supranational parliaments,[87] they report that only 3% of parliaments currently use AI for drafting bills and managing amendments.[88] On the other hand, the report finds that there is greater use of AI in non-core legislative functions. Overall, it finds that 29% of parliaments use AI for at least some function, albeit, mostly for minor and technical functions.[89] The most common uses of AI are for transcribing parliamentary proceedings (used in 20% of

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[79] Fotios Fitsilis, Jörn von Lucke and Franklin De Vrieze, 'Inception, Development and Evolution of Guidelines for AI in Parliaments' (2025) TPLeg 1　.

[80]　ibid　6.

[81] Marci Harris, 'Comparing AI Adoption in the US Congress to Legislatures Worldwide' (PopVox, 22 November 2024) <https://www.popvox.org/blog/assessing-us-congressional-ai-adoption> accessed 7 November 2025.

[82] Inter-Parliamentary Union　, 'Use cases for AI in Parliaments' (January 2025), <https://www.ipu.org/ai-use-cases> accessed 9 November 2025　. To give context to these figures: According to the IPU, there are 188 national parliaments in the world (183 of which are members of the IPU), 81 are bicameral (162 chambers) and 107 are unicameral, making a total of 269 chambers of parliament. Inter-Parliamentary Union, 'National Parliaments' <https://www.ipu.org/national-parliaments> accessed 9 November 2025.

[83] Fotios　Fitsilis and Patricia Gomes Rêgo　de Almeida, 'Artificial Intelligence and its Regulation in Representative Institutions' in Yannis Charalabidis, Rony Medaglia and Colin van Noordt (eds), *Research Handbook on Public Management and Artificial Intelligence* (Edward Elgar Publishing 2024) 151–166.

[84] Palmirani and others, 　*Report on AI in Parliamentary Context*　(n 5).

[85] ibid　.

[86] Inter-Parliamentary　Union,　'World　e-Parliament　Report　2024',　(2024)　44 <https://www.ipu.org/resources/publications/reports/2024-10/world-e-parliament-report-2024> accessed 9 November 2025.

[87]　ibid 5.

[88] ibid　44.

[89] ibid　21.

surveyed parliaments), cybersecurity (15% of parliaments), and translation (10% of parliaments).[90]

There are various reasons why legislatures generally lag behind other governmental bodies and the private sector in the race to integrate AI in their operation, and particularly in lawmaking. One is that legislatures are typically seen as traditionalist institutions, which resist institutional change in general, and exhibit a skeptical and conservative attitude toward adopting new technologies, in particular.[91] In addition to resistance-to-change and tech-skeptical attitudes, parliamentary actors often lack the knowledge and training for adopting AI solutions in their work.[92] But beyond institutional, organizational, and technical barriers, there are security, democratic, legal and ethical concerns (as will be elaborated in section 5.3), and these concerns are exacerbated by the lack of specific laws and regulations (and until recently, even guidelines) for the use of AI in parliaments.[93] These concerns should not be taken lightly, and legislatures should not be faulted for taking a cautious view.[94]

Notwithstanding these barriers and concerns, there are several reasons for expecting a surge in the use of AI in parliaments in the coming years. First, the external shock created by Covid-19 pushed legislatures toward adaptation and digitalization and helped them overcome resistance to institutional change and to digital solutions.[95] Second, the introduction of GenAI tools and their massive popular adoption contribute to a paradigm shift about the ease and benefits of employing such tools.[96] Third, the growing use of AI in other governmental bodies also causes legislatures to take notice of the potential benefits for them as well.[97] Fourth, many parliaments deal with growing workloads and scarce resources, chief among them limited time, and some also with gridlock; leading to strong interest in adopting digital and AI tools to facilitate parliamentary work, save time and resources, and generally make legislatures more effective and efficient.[98] Fifth, there is an emergence of resources, manuals and guides written by various organizations (such as Popvox, IPU and WFD) particularly for legislators and legislative staff,

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[90] ibid   44.
[91]   Mark Goodwin and Martyn Atkins, 'Parliament and Modernization' in Cristina Leston-Bandeira and Louise Thompson (eds), *Exploring Parliament* (OUP 2018) 296.
[92]   Dimitris Oryzis, Apostolos Dalas, Dimitris Spiliotopoulos and Fotios Fitsilis, 'Parltech: Transformation framework for the digital parliament' (2021) 5(1) Big Data and Cognitive Computing 15
[93] Fitsilis and others, *'Guidelines for AI'* (n 17)   17.
[94] Another possible explanation may be the use of "Shadow AI" – that is, of parliamentarians privately using AI, such as ChatGPT in their work, without its formal institutional integration, and that such uses were not reported. This exacerbates the risks of unregulated use of AI. See Nicole Gillespie and Steven Lockey 'Major survey finds most people use AI regularly at work – but almost half admit to doing so inappropriately' The Conversation (29 April 29, 2025) <https://theconversation.com/major-survey-finds-most-people-use-ai-regularly-at-work-but-almost-half-admit-to-doing-so-inappropriately-255405> accessed 12 November 2025.
[95]   Ittai Bar-Siman-Tov, Olivier Rozenberg, Cyril Benoît, Israel Waismel-Manor and Asaf Levanon, 'Measuring legislative activity during the Covid-19 pandemic: introducing the ParlAct and ParlTech indexes' (2021) 1(1) International Journal of Parliamentary Studies 109;   Israel Waismel-Manor, Ittai Bar-Siman-Tov, Olivier Rozenberg, Asaf Levanon, Cyril Benoît and Gal Ifergane, 'Should I stay (open) or should I close? World legislatures during the first wave of COVID-19' (2024) 72(1) Political Studies 200.
[96]   Ylenia Maria Citino, 'Leveraging automated technologies for law-making in Italy: Generative AI and constitutional challenges' (2025) 78(3) Parliamentary Affairs 625.
[97] Yannis Charalabidis, Rony Medaglia and Colin van Noordt (eds), Research Handbook on Public Management and Artificial Intelligence (Edward Elgar 2024).
[98]   Wim Voermans, Hans-Martien ten Napel and Reijer Passchier, 'Combining efficiency and transparency in legislative processes' (2015) 3(3) The Theory and Practice of Legislation 279.

to assist, but also help regulate, the adoption of AI in legislatures.[99] There are also emerging commercial companies offering tailored AI tools for legislatures,[100] in addition to the growth of commercial general-use AI products.[101] In short, external shocks and legislatures' growing demands; the increasing ease of AI use and tailored efforts for making it accessible and understandable to parliamentarians; the potential benefits of employing AI; and the popularity of its use by everyone else (including other governmental bodies), would probably overcome legislatures' resistance to change.

Indeed, recently, parliaments are beginning to show growing interest in exploring the use of AI. In many legislatures and international parliamentary organizations, "AI and its untapped potential are now a topical issue under permanent discussion... and parliaments... are increasingly considering its use."[102] The common expectation is that AI will increasingly make its way into parliaments, and that we will see growing numbers of legislatures adopting AI, and that the types of parliamentary uses of AI will become more substantial and extensive, and impact more core legislative functions of parliaments.[103]

This expectation is supported by considering the clear trend of increasing AI use that emerges when comparing the data in the IPU World e-parliament Report 2024 to the previous reports: from a single case in 2016, to 10% of parliaments experimenting with early forms of AI in 2020, up to 29% in 2024 (Figure 3).[104]

Figure 3: Use of AI in parliaments (2016–2024).

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[99] eg, PopVox, 'Artificial Intelligence for the Legislative Branch' ≤https://www.popvox.org/artificial-intelligence> accessed 9 November 2025; Inter-Parliamentary Union, 'Artificial Intelligence' (last updated 4 November 2025) <https://www.ipu.org/impact/democracy-and-strong-parliaments/artificial-intelligence> accessed 9 November 2025.   ; Westminster Foundation for Democracy, 'Guidelines for AI in Parliaments' (16 July 2024) <https://www.wfd.org/ai-guidelines-parliaments> accessed 9 November 2025.

[100]   eg   , Propylon, 'Empowering rule-makers and rule-takers in the AI era' <https://propylon.com/rule-makers/> accessed 9 November 2025.
   ;Asimov AI, 'Rivoluziona le tue analisi legislative' <https://asimov.law/index.html#home> accessed 9 November 2025   ;   Quorum,   'Legislative   Intelligence & State   Legislatures' https://www.quorum.us/solutions/legislative-intelligence-state-legislatures/ accessed 9 November 2025.   ; Naveen Joshi, 'Why Governments Must Rethink the Legislative Process with AI' (Allerin 16 July 2024) <https://www.allerin.com/blog/why-governments-must-rethink-the-legislative-process-with-ai>   accessed   9 November 2025.
[101] On the use of commercial general-use AI tools (such as OpenAI's ChatGPT, Google's Bard, and Anthropic's Claude, etc.) by parliaments see   Marci Harris and Aubrey Wilson, 'Representative Bodies in the AI Era: Insights for Legislatures' (POPVOX, Vol 1, 2024) 30-31.
[102] Citino (n 90)   2–   3. See also Palmirani and others, *Report on AI in Parliamentary context* (n 5)   .
[103] Ibid   ;   Jörn von Lucke, Fotios Fitsilis and Stéphane Gagnon, 'Comparative Analysis of the Relevance and Priority for Artificial Intelligence Tools, Services and Open Questions in the Hellenic, Argentinian and Canadian Parliaments' (2024) 4(2) International Journal of Parliamentary Studies 182.
[104] Inter-Parliamentary Union, 'World e-Parliament Report 2024' (n 81)   21.
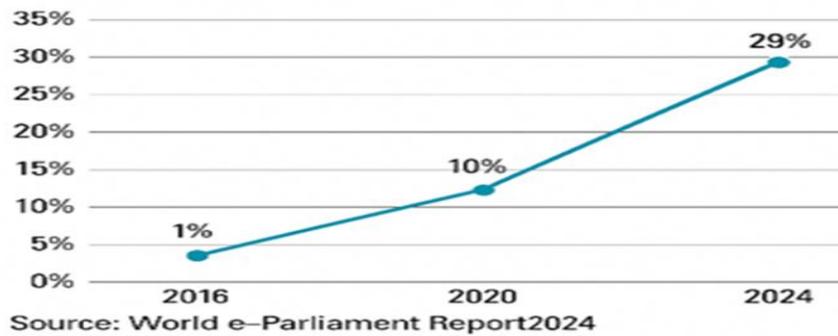
Furthermore, the expectation of growing parliamentary use of AI is bolstered by considering the World e-parliament Report 2024 survey data on the current vs planned usage of AI.[105] Figure 4 illustrates the expected growth in the use of AI for functions other than core-lawmaking functions, based on the data adapted from the World e-parliament Report 2024 on current and planned uses.

Figure 4: Current vs planned uses of AI in parliaments across non-legislative functions
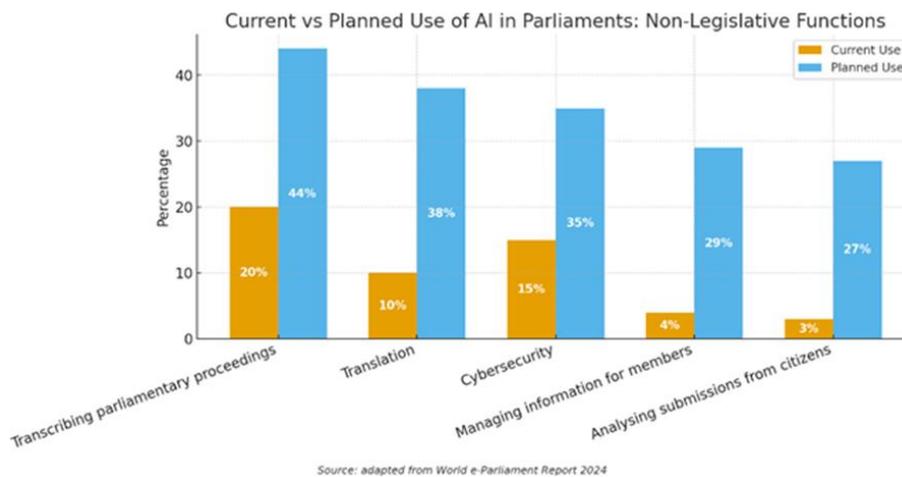

Figure 5 illustrates the expected growth in the use of AI for core-legislative functions, based on the current and planned uses of AI in managing amendments and drafting bills.

Figure 5: Current vs planned uses of AI in parliaments across legislative functions

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[105] ibid   44.

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Current vs Planned Use of AI in Parliaments: Legislative Functions

Source: adapted from World e-Parliament Report 2024
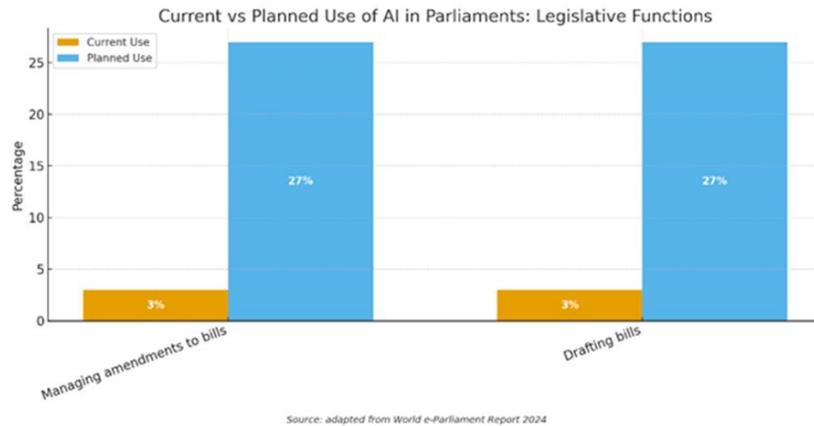
As these figures illustrate, AI use for at least one non-core-legislative function could be expected to reach almost half of the parliaments (with 44% of surveyed parliaments planning to use AI for transcribing proceedings). Moreover, AI use for lawmaking could be expected to reach slightly over one fourth of legislatures (with 27% planning to do so). Hence, there is ample reason to believe that we are at the cusp of the spring of AI in parliaments, including greater use of AI in lawmaking. The next section will delve deeper into the use of AI in core-legislative functions.

10.2   The Uses of AI in Lawmaking
(c) AI and Legislative Drafting

As indicated in the previous section, the use of AI for legislative drafting is still in its incipient stages and is currently employed only by very few parliaments. Yet, it is receiving increasing attention in the AI and lawmaking community.[106] AI, and particularly LLMs, are similarly garnering increasing attention in the legislative drafting community.[107] Incidentally, drafting bills was also the first response given by ChatGPT in the original version of an experiment in which ChatGPT was asked to propose 10 fields of application for ChatGPT in a parliament.[108]

The idea is not that LLMs would replace human drafters in writing bills. That would raise serious constitutional, legal and ethical concerns.[109] Moreover, LLMs underperform in this task compared to expert human drafters (at least presently).[110] However, recent work shows that supporting human drafters through various AI methods could indeed provide valuable tools for legislative drafting.[111] There are also suggestions for developing an Integrated Legislation

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[106] Monica Palmirani and others, *Legal Drafting in the Era of Artificial Intelligence and Digitisation* (2022).   ; for a recent overview see Elhanan Schwartz, Ittai Bar-Siman-Tov and Roy Gelbard, 'When Computers Speak Laws: Legislative Engineering in the Age of Artificial Intelligence' 8 LAW, SOCIETY & CULTURE 353-396 (2025)

[107] For a recent overview see Matthew Waddington, 'Digitizing Legislation: Progress and Prospects' (2025) in Legislating for Risk & Precaution 171.

[108] Jörn Von Lucke and Sander Frank, 'A few thoughts on the use of ChatGPT, GPT 3.5, GPT-4 and LLMs in parliaments: Reflecting on the results of experimenting with LLMs in the parliamentarian context' (2025) 6 Digital Government: Research & Practice 1.

[109]   ibid. see also Guzyal Hill, Matthew Waddington and Leon Qiu, 'From pen to algorithm: optimizing legislation for the future with artificial intelligence' (2025) 40 AI & Society 3075   .

[110] ibi   d.

[111] For recent overviews see Michał Araszkiewicz & Monika Florczak-Wątor, 'AI and the Principles of Proper Legislation: Enhancing Quality, Understandability, and Consistency in Legal Texts' (2025) TPLeg 1   ; Michele Corazza and others, 'Hybrid AI for Supporting the European Drafting Legislation' in *New Frontiers in Artificial Intelligence* (Springer 2025).

Drafting Environment (ILDE), which will harness innovative AI capabilities to create a working environment that would aid the work of human drafters, similarly to professional integrative platforms used by coders.[112] Supporters of these initiatives argue that integrating AI in an assistive capacity to support the work of drafters has the potential not only to improve efficiency, but to also contribute to the quality of legislation.[113]

This is the subject of the contribution by Michał Araszkiewicz and Monika Florczak-Wątor to this special issue: "AI and the Principles of Proper Legislation: Enhancing Quality, Understandability, and Consistency in Legal Texts."[114] The main argument of this article is that proper integration of AI tools into the legislative drafting process can promote constitutional principles of proper lawmaking. It further claims that AI "can bridge the gap between the ideal of rational lawmaking and the cognitive and institutional limitations of legislators."

The article begins with exploring the constitutional and legisprudential principles of proper legislation and then examines the challenges that legislative drafters face in fully complying with these principles. Next, the article assesses how AI can help legislative drafters overcome these obstacles. It argues that employing AI tools can significantly reduce inconsistencies, ambiguities, structural and linguistic defects, and redundancies, while enhancing efficiency, accuracy, and coherence; thereby contributing to greater clarity, consistency, and predictability of legislation. Among various uses of AI, Araszkiewicz and Florczak-Wątor focus on information retrieval and classification and on error detection in drafted texts (albeit they end by also touching upon the prospects of generative AI and Retrieval-Augmented Generation).

In addition to offering an in-depth exploration of how AI can be employed in legislative drafting, this article makes two unique contributions to the scholarship. First, it brings together the AI and law scholarship with the scholarships on legislative drafting and legisprudence (which have long emphasized ideas of rational lawmaking, quality of legislation and principles of good lawmaking).[115] Second, while much of the existing discussions about AI in parliaments focus on technical issues, tend to emphasize benefits such as improving functionality or efficiency, or highlight constitutional concerns, this article makes a bold and strong normative constitutional case for AI in legislative drafting. It argues that AI use "is not merely an optional innovation but a constitutional imperative that enhances the legitimacy of the lawmaking process." Nevertheless, the article ends with briefly addressing the main risks associated with using AI in legislative drafting.

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[112] Elhanan Schwartz, Ittai Bar-Siman-Tov & Roy Gelbard, 'Design Principles for Integrated Legislation Drafting Environment' (forthcoming) Lecture Notes in Artificial Intelligence (LNAI) (SSRN 30 August 2023) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4556959> accessed 8 November 2025 ; Schwartz and others (n 100) .

[113] ibid.

[114] Michał Araszkiewicz and Monika Florczak-Wątor, 'AI and the Principles of Proper Legislation: Enhancing Quality, Understandability, and Consistency in Legal Texts' (2025) TPLeg 1 .

[115] For overviews see e.g. Ittai Bar-Siman-Tov and Helen Xanthaki, 'Legislation, Legisprudence and Comparative Law' in Jan M Smits and others (eds), *Elgar Encyclopedia of Comparative Law* (2nd edn, Edward Elgar Publishing 2023); A D Oliver-Lalana and L J Wintgens, 'Legisprudence' in *Encyclopedia of the Philosophy of Law and Social Philosophy* (Springer 2019); Helen Xanthaki, 'Quality of Legislation: An Achievable Universal Concept or a Utopian Pursuit?' in Marta Tavares Almeida (ed), *Quality of Legislation* (Nomos 2011). Admittedly, however, this has mostly been true to the European branch of legisprudence. See Ittai Bar-Siman-Tov, 'The Global Revival of Legisprudence: A Comparative View on Legislation in Legal Education and Research' in A D Oliver-Lalana (ed), *Conceptions and Misconceptions of Legislation* (Springer 2019).

(d) AI and Legislative Amendments

In addition to legislative drafting, the other major question related to integrating AI in lawmaking is how could AI be integrated into the legislative amendment process? This is the subject of the contribution by Federico Bonomi, Nicola Lupo and Giovanni Piccirilli to this issue: "Logical and Procedural Rules for Parliamentary Amendments, in Light of the Italian Experience, from Bentham to AI."[116] Their article focuses on the transformational potential that AI, and particularly generative AI, holds for the management of legislative amendments. It explores the promise but also challenges (both practical and ethical) of integrating AI in core lawmaking, focusing on the Italian experience.

The article combines ideas ranging from AI to traditional legisprudence, going back to the classic works of Jeremy Bentham. Fascinatingly, the article offers a novel way of conceptualizing legislative procedure as having an "algorithmic" nature. Like algorithms, legislative procedure can be understood as "a set of instructions that must be followed in a fixed order," as involving a set of binary decisions (in the case of amendments, binary votes on maintaining the existing text or approving its modification), and as embodying principles of rationality and logic. This "algorithmic" nature dates back to influences of thinkers like Bentham and Condorcet, long before the age of AI. Yet, the authors claim that it makes parliamentary procedure particularly apt for AI integration.

The Article then focuses on how generative AI can assist in the tasks performed by the chairs of the plenary and committees (and their staff) throughout the main steps of the amending process. Namely: Checking for formal requirements; checking for substantive or content requirements; vote ordering; and visualization and explanation. For each of these steps, Bonomi, Lupo and Piccirilli tested two models (ChatGPT 4.1 and Gemini 2.5 Flash), using a combination of two simple prompt-engineering techniques: In-Context Learning with instructions and role prompting.

The authors complemented these tests with exploring a real case that occurred in the Italian Senate, in which the chamber faced a procedural crisis due to the submission of millions of filibustering amendments to a single bill. They explored how the use of GenAI could have assisted the MPs in handling this challenge. I think that the case-study the authors chose is interesting as it demonstrates two sides of the possible effects of GenAI. GenAI would make producing legislative texts much easier and can thus lead to massive growth in legislative texts, with MPs using LLMs to produce many bills, amendments, etc, including for the purpose of filibustering. On the flip side of the coin, GenAI can also help parliaments handle the massive growth of legislative texts.

Bonomi, Lupo and Piccirilli's conclusion is that "GenAI, when properly integrated, can serve as a significant ally in augmenting the productivity of some parliamentary functions, even when related to the core of the lawmaking activity." They further conclude that GenAI can significantly enhance the efficacy, transparency, and coherence of legislative operations. However, the authors also acknowledge the concerns surrounding AI, and therefore call for cautious and responsible implementation, in accordance with the principles established by the guidelines for proper integration of AI. These guidelines are discussed in the next section.

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[116] Federico Bonomi, Nicola Lupo and Giovanni Piccirilli, 'Logical and Procedural Rules for Parliamentary Amendments, in Light of the Italian Experience, from Bentham to AI' (2025) TPLeg 1.

10.3   Guidelines for AI in Parliaments

AI has transformative potential to improve, and perhaps also revolutionize and disrupt the work of parliaments. There are great potential benefits and unprecedented opportunities, and parliaments cannot afford to stay behind and forgo the benefits of AI. As we have seen, AI's positive potential includes not only increasing the effectiveness and efficiency of legislatures. It can also contribute to promoting democratic values such as transparency, accessibility and public participation,[117] as well as constitutional and legisprudential ideals of good lawmaking.

However, there are also formidable challenges and dangers in introducing AI into these time-honored institutions, which are the cornerstones of democracy. Indeed, I believe that integrating AI in parliamentary lawmaking raises unique democratic and constitutional concerns compared to its integration in other fields. Replacing taxi drivers or surgeons with AI-robots certainly raises its share of concerns (such as safety, liability, moral and ethical dilemmas, and the replaced humans' livelihood). However, replacing legislators with AI can undermine the core values of representative democracy itself, and the very idea that the people are governed by laws enacted by the representatives they have chosen.[118] Of course, unlike autonomous cars that have already replaced taxi drivers in some places, no jurisdiction is seriously considering completely replacing legislators with AI, and ditching democracy in favor of lawmaking by AI.[119] Yet, even less extreme solutions, such as AI augmenting legislators' decision-making or excessive and careless employment of AI in core functions of parliaments, can raise serious concerns about parliamentary autonomy and democratic accountability, and can endanger democratic, constitutional and legisprudential values.[120] In addition, there are the general risks of using AI, such as bias and discrimination, data privacy and security, hallucinations, misinformation and manipulation, lack of transparency, etc.[121]

Thus, it is crucially important that parliaments tread carefully and judiciously in adopting AI, to manage technological innovation while not compromising democratic, legal and ethical values and principles. Yet, at present, specific legal regulations for integrating and operating AI in parliaments are still scarce;[122] and general regulations, such as the AI Act, are insufficient to fill this void (even though the Act does classify certain AI systems intended for democratic

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[117] Fabiana Di Porto and others, 'Mining EU Consultations through AI' (2024) A I & L.

[118] Arguably, the risks are exacerbated in constitutional lawmaking. See Richard Albert and Kevin Frazier 'Should AI Write Your Constitution?' *U of Texas Law, Legal Studies Research Paper* (2025).

[119] Yet, in some other areas, regulatory functions are already carried out by algorithms. See Lyria Bennett Moses and others, 'Laws for Machines and Machine-made Laws' in Janina Boughey and Katie Miller (eds), *The Automated State: Implications, Challenges and Opportunities for Public Law* (2021) 232   ; Karen Yeung, 'Algorithmic Regulation: A Critical Interrogation' (2017) 12 Regulation & Governance 505   ; Mireille Hildebrandt, 'Algorithmic Regulation and the Rule of Law' (2018) 376 Philosophical Transactions of the Royal Society A: Mathematical, Physical & Engineering Sciences 2128   ; Niva Elkin-Koren and Maayan Perel, 'Algorithmic Governance by Online Intermediaries' in Eric Brousseau, Jean-Michel Glachant and Jérôme Sgard (eds), *Oxford Handbook of International Economic Governance and Market Regulation* (2018).

[120] Pier Francesco Bresciani and Monica Palmirani, 'Constitutional Opportunities and Risks of AI in the Law-Making Process' (2024) 2 Federalismi.it 1   ; Pier Francesco Bresciani, 'Rethinking Parliamentary Autonomy in the Age of AI: A Study of Digital Constitutional Theory' (SSRN 13 June 2025) <https://papers.ssrn.com/abstract=5318237> accessed 8 November 2025.

[121] Id.

[122]   Inter-Parliamentary Union, 'World e-Parliament Report 2024' (n 81)   19 (reporting that "A mere 7% of parliaments have holistic legislation and internal regulations to manage AI deployment responsibly," albeit 11% of parliaments state that they have at least some legal regulations governing AI usage and 14% report having internal procedures on this subject).

processes as high-risk, considering their potentially significant impact on democracy, the rule of law and individual freedoms).[123] Moreover, as Palmirani et al. report, in practice, "[t]he technological transformation of parliaments does not seem to be guided by principles derived from legal theory underlying democracy and the rule of law, or general constitutional principles."[124] Their report warns that "there is a risk that the adoption of AI will be driven by practical and efficiency considerations from administrative staff or even private actors in the AI industry, without sufficient regard for the related legal and constitutional implications."[125] There are also concerns about "shadow-AI": unsanctioned and undisclosed use of AI by legislators and staff, outside formal institutional procedures, which exacerbates risks without necessary safeguards, transparency and oversight.[126]

Hence the great importance of guidelines for AI in parliaments. This is the topic of the contribution by Fotios Fitsilis, Jörn von Lucke and Franklin De Vrieze to this issue: "Inception, development and evolution of guidelines for AI in parliaments."[127] These authors are the editors of the *Guidelines for AI in Parliaments*,[128] published by the Westminster Foundation for Democracy in July 2024, representing "the first global, interinstitutional, intersectoral and interdisciplinary effort" in this area.[129]

Their article introduces these guidelines and offers a brief outline of the 40 guidelines, which are divided across six sections: Ethical Principles, Artificial General Intelligence and Human Autonomy, Privacy and Security, Governance and Oversight, System Design and Operation, and Capacity Building and Education. Ethical principles and democratic values are given prominence in the guidelines. Special emphasis is given to accountability, transparency, fairness, explainability and oversight, as well as to respect for human rights, human dignity, human autonomy, non-discrimination and data bias, privacy and security. Additionally, the guidelines deal with system design and operation, prioritizing interoperability, transparency, reliability, and safety.

No less important than presenting the guidelines themselves, the article offers a detailed analysis of the guidelines' development process. Indeed, the process of their development is no less impressive than the publication that resulted from this process. It included two phases over a course of a year and a half, involving a multidisciplinary team of 22 international experts (both academics and practitioners), from seven countries in five different continents. The

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[123] Recital 61: High-risk AI systems in the administration of justice < https://ai-act-law.eu/recital/61/> accessed 11 November 2025; Pier Francesco Bresciani and Monica Palmirani, 'AI Act and National Parliaments: How the EU is Regulating Democracy in the Digital Era' (2025) 1 Ragion pratica 249   ; Rudolf Berkes and Boldizsár Szentgáli-Tóth, 'Artificial Intelligence in the Service of Parliaments: Some Arguments for the Necessity of a Normative Legal Framework at the European Level' (2025) 19(2) Masaryk U J L & Technology 237.

[124] Palmirani and others   (n 5) 9-10.
[125] ibid   .
[126] Tom Krantz and others 'What is shadow AI?' IBM Think < https://www.ibm.com/think/topics/shadow-ai > accessed 12 November 2025; Nicole Gillespie and Steven Lockey 'Major survey finds most people use AI regularly at work – but almost half admit to doing so inappropriately' The Conversation (29 April 29, 2025) <https://theconversation.com/major-survey-finds-most-people-use-ai-regularly-at-work-but-almost-half-admit-to-doing-so-inappropriately-255405> accessed 12 November 2025.

[127]   Fotios Fitsilis, Jörn von Lucke and Franklin De Vrieze, 'Inception, Development and Evolution of Guidelines for AI in Parliaments' (2025) TPLeg 1.
[128] Fotios Fitsilis   and others, *Guidelines for AI in Parliaments* (n 17).
[129] Fotios Fitsilis, Jörn von Lucke and Franklin De Vrieze   (n 118).

article is therefore important not only for understanding the guidelines for AI in parliaments but can also serve as a guide for future efforts to develop updated guidelines and regulations on the use of AI in parliaments. Indeed, the IPU has also published Guidelines for AI in parliaments,[130] and given the highly dynamic and fast-evolving nature of the subject matter, updates and other future efforts would certainly be needed.

The article also discusses the question of which regulatory approach is most apt for regulating the use of AI in parliaments, and why the regulatory instrument of guidelines was chosen. Hence, the article also contributes to broader themes in regulation theory, and to themes previously explored in our journal about guidelines and manuals for parliaments, their role, development and potential impact.[131]

Conclusion

Parliaments are increasingly realizing that we are entering the age of AI, and that they have an important role to play in meeting the challenges and dangers of this age: both in regulating AI and in integrating AI. At present, legislatures around the world are contemplating legislative responses for regulating AI, and are in the initial stages of contemplating the introduction of AI into their own operations.

Editing this special issue has been arduous, but very rewarding and edifying. I hope that readers of this special issue will find reading it no less rewarding and illuminating. It is my hope that this special issue will contribute to the fields of legisprudence and legislative and parliamentary studies, as well as to the fields of AI, AI & law, and law & technology more broadly. Hopefully, this special issue would also provide timely and useful practical contributions for legislators, parliamentarians and practitioners, as they navigate the new and challenging terrains of regulating AI and of integrating AI into their work.

Acknowledgments

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[130]   Inter-Parliamentary Union, 'About the Guidelines' (2024) <https://www.ipu.org/ai-guidelines/about-guidelines> accessed 8 November 2025.
[131] See   e   g   Ronan Cormacain, 'An Empirical Study of the Usefulness of Legislative Drafting Manuals' (2013) 1(2) TPLeg 205   ;Tímea Drinóczi, 'The OSCE ODIHR Guideline on Democratic Law-Making for Better Laws: A Source of Inspiration for Strengthening Democracy' (2024) 12(3) TPLeg 281   ; Victor Marcel Pinheiro, 'Review: ODIHR Guidelines on Democratic Lawmaking for Better Laws' (2024) 12 TPLeg 344.

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