Re-shaping Interparliamentary Cooperation through Advanced Information Sharing*

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***Abstract*:** A new scientific partnership aims to advance the linear evolution of interparliamentary co-operation. The partnership's concept foresees the implementation of exploratory workshops that investigate the relevance and priority of digital solutions that are based on artificial intelligence (AI) in parliament and workshops have recently been implemented in Greece and Argentina that lay the foundation for further research in Australasia. The results obtained from such workshops suggest that AI could disrupt traditional channels of interparliamentary cooperation in Australasian legislatures and bring entirely novel approaches to the discussion. A joint research and development agenda on AI in parliaments, regionally managed for Australasia, could play its part in making parliaments more sustainable and resilient. Ultimately, the use of AI has the potential to re-shape parliamentary procedures making them more inclusive, sustainable and effective.

INTRODUCTION

Emerging, disruptive technologies can be seen as an opportunity or threat. The underlying everlasting debate, however, should not turn legislatures into modern (institutional) luddites but provoke intense internal debate about the 'parliament of

the future'.[1] This article describes AI research that has been conducted on the Hellenic Parliament and the Honourable Chamber of Deputies of Argentina and proposes its further development to be undertaken in Australasia. The general purpose of this article is to showcase the opportunities that advanced technologies create in the area of interparliamentary cooperation, along with an approach that allows for their careful evaluation and analysis, in order to harness their full potential while avoiding associated risks in the often conservative operational environment of parliaments.

Interparliamentary cooperation enhanced by advances in the area of information sharing can be considered as a discrete parliamentary function. The significance of information sharing between parliaments cannot be neglected. While parliaments have operated for decades as stand-alone institutions, their ability to co-ordinate political and cultural activities with peer institutions, to influence policy-making outside the national borders and to promote national interests has given rise to different cooperation modes and patterns. These are more visible and well studied in the European Union, where interparliamentary cooperation of national member state parliaments has evolved as an instrument for coordinating and influencing the decision-making process at the European level.[2] Other cooperative schemes are becoming important at the regional and global level,[3] and might become relevant for Australasia. Interparliamentary cooperation can also be of technical nature, which refers to the exchange of (technical) experience and skills among parliamentary employees.[4] 'Advanced' in the context of this article means artificial intelligence (AI)-based. This definition is a mere working hypothesis and there are several other technologies that could be encompassed by this generic term.[5] AI on its own part does

[1] An early vision of the 'parliament of the future' is provided by A Williamson & F Fallon, 'Transforming the future parliament through the effective use of digital media'. *Parliamentary Affairs* 64(4) 2011, pp. 781-792.

[2] For a concise presentation of interparliamentary cooperation mechanisms in the European Union see, indicatively, C Hefftler & K Gattermann, 'Interparliamentary Cooperation in the European Union: Patterns, Problems and Potential', in C Hefftler, C Neuhold, O Rozenberg & J Smith (eds), *The Palgrave Handbook of National Parliaments and the European Union*. London: Palgrave Macmillan, 2015.

[3] S A Alshareef, 'Inter-Parliamentary Cooperation: The Next Frontier in Global Politics'. International *Journal of Law and Public Administration*, 4(2) 2021, pp. 38-43.

[4] The French Senate provides an indicative framework of technical interparliamentary cooperation: Accessed at: https://www.senat.fr/international/english/coop.html

[5] A discussion and preliminary evaluation of advanced technologies in the parliamentary workspace is given by D Koryzis, A Dalas, D Spiliotopoulos & F Fitsilis, Parltech: Transformation framework for the digital parliament. *Big*

not constitute a single technology nor does it represent a specific application. To make things fuzzier, when talking about complex organisations like parliaments, there are not even well-defined case studies, for which such applications might be suitable.

Parliaments around the globe have started taking steps – some cautious, some more aggressive – to investigate the potential of disruptive technology in parliamentary environments.[6] The authors have not found any current working examples of AI in Australasian parliamentary institutions. It is not known whether some organisations might not be publishing information from their participation in research projects or their own trials of technology. Nonetheless, AI is on the rise and several parliaments are preparing by building up know-how. For instance, in the Australasian region, the Parliament of Victoria established an All-Party Group (APG) on AI to study the topic.[7] In addition, the parliamentary research service of the Parliament of New South Wales has dealt with issues around the application of AI by the government.[8] Though the aforementioned work is conducted by sub-national parliaments, it clearly shows the awareness and concerns of representative institutions towards the developments around AI. Other regional research efforts attempt to shine light on the role of algorithms, data and AI for effectively facilitating public participation and engagement; a critical parliamentary objective.[9]

The geography of Australasia presents challenges in terms of physical, in-person communication due to practicalities and cost. State-of-the-art AI technology can therefore respond to these hurdles, while automating or accelerating standard

Data and Cognitive Computing 5(1) 2021, p. 15. These technologies go there under the collective term of 'ParlTech'.

[6] A forthcoming study identified 39 use-cases of AI in parliaments worldwide. See F Fitsilis & P de Almeida, (Artificial Intelligence and its Regulation in Representative Institutions, in Y Charalabidis, R Medaglia & C van Noordt (eds), *Research Handbook on Public Management and Artificial Intelligence*. Edward Elgar Publishing, forthcoming.

[7] The APG has issued a relevant primer on AI. See The Parliament of Victoria, *Artificial Intelligence Primer*. 2018. Accessed at: https://www.parliament.vic.gov.au/publications/research-papers/download/36-research-papers/13863-artificial-intelligence-primer.

[8] D Montoya & A Rummery, *The use of artificial intelligence by government: parliamentary and legal issues*. NSW Parliamentary Research Service, E-brief 02/2020. Accessed at: https://www.parliament.nsw.gov.au/researchpapers/Documents/The%20use%20of%20AI%20by%20government%20-%20parliamentary%20and%20legal%20issues.pdf.

[9] F Marmolejo-Ramos, T Workman, C Walker, D Lenihan, S Moulds, J C Correa & B Sonna, 'AI-powered narrative building for facilitating public participation and engagement'. *Discover Artificial Intelligence* 2(1) 2022, p. 7.

parliamentary processes. This contribution highlights the opportunities that AI presents for advancing interparliamentary co-operation in Australasia. The next section investigates the significance and boundaries of AI as it stands today. This is followed by a description of the structured approach that was taken in obtaining empirical data on the use, current or potential, of AI in parliaments. This approach takes the form of an 'exploratory workshop'. The proposed concept design requires limited involvement and resources from the target institutions, while offering considerable advantages in return and has been successfully tested in a European and a Latin American parliament (Greece and Argentina). Particular attention will be placed on the potential applications of AI-based communication and how it could re-shape interparliamentary cooperation in the region. Empirical data, however, would be necessary for a detailed evaluation and analysis. Such data could emerge from the organisation of the above-mentioned form of workshop in the Australasian parliaments.

STATE-OF-PLAY AND REGULATION OF ARTIFICIAL INTELLIGENCE

There is no standard approach that can be followed for the application of AI in parliamentary workspaces. Different parliamentary cultures, (legal) traditions, available funding, existing institutional know-how and technical expertise call for different solutions. Moreover, technology is evolving constantly. Keeping that in mind, any digital solution, that is the selection to use a particular AI technology, such as deep learning, machine learning, visual agents and natural language processing, just to name a few, applied on a specific parliamentary task, risks quickly becoming obsolete. Parliaments with no sufficient resources might tend to use a more cautious approach. This is not necessarily a negative approach but needs to be a conscious, educated institutional decision.

In order to determine what AI can do for parliaments, it helps to know the state-of-play in AI. There are a multitude of different AI models and advanced algorithms that can be used (and some already do so) by parliaments in their institutional procedures. ChatGPT by OpenAI reached instant fame in late 2022 by mainstreaming AI technology. Using a simple authentication process, this AI-driven chatbot is accessed via a user prompt and equips the user with virtually limitless options.[10] The underlying

[10] Accessed at: https://chat.openai.com/.

Generative Pre-trained Transformer 3 (GPT-3) model uses deep learning to produce human-like text. As such, the system is not only generating documents, reports and speeches or providing solutions to specialised tasks. It is capable of summarising long texts, brainstorming, providing explanations to complex questions, retrieving information from large textual corpora, translating texts from and to different languages, providing estimates for planning tasks, writing letters and emails and many more.

ChatGPT is not the only system in use. A different one based on GPT-3 was 'questioned' in 2021 by the Committee for the Future of the Finnish Parliament.[11] While potential users might be scared off by its proprietary nature for institutional application, there are also several open source algorithms that can handle similar tasks with similar or perhaps even greater precision. In principle, parliaments should not worry about whether or not such systems will be deployed within the premises – they will – but should be concerned about who sets the rules of engagement.[12] Ultimately, we argue that the question about the necessity of AI-based systems and services in the parliamentary workspace poses a false dilemma. The concern is not about delegating decisions to an AI system. These systems have the potential to substantially advance parliamentary work and influence, provided:

- they are co-developed and operated by competent parliamentary professionals;
- their operation being regulated by an ethical and procedural framework;
- their outputs (and the responsibilities for them) are verified by human beings; and
- accountability is accepted by the institution itself.

Such human verification is technically known as '*human*-in-the-loop' but for the case of governance, the term '*society*-in-the-loop' might be more pertinent.[13]

[11] F Fitsilis, 'Artificial Intelligence (AI) in parliaments–preliminary analysis of the Eduskunta experiment'. *The Journal of Legislative Studies* 27(4) 2021, pp. 621-633. In this regard, see also Parliament of Finland, Committee for the Future, 2021. Accessed at: https://www.eduskunta.fi/EN/tiedotteet/Pages/Committee-for-the-Future-heard-AI-probably-as-the-first-parliamentary-committee-in-the-world.aspx.

[12] On the regulation of advanced algorithms (not only) in the parliamentary workspace, see F Fitsilis, *Imposing regulation on advanced algorithms*. Cham: Springer, 2019.

[13] G Siemens, F Marmolejo-Ramos, F Gabriel, K Medeiros, R Marrone, S Joksimovic & M de Laat. 'Human and artificial cognition'. *Computers and Education: Artificial Intelligence* 3 2022, p. 100107.

INVESTIGATING THE RELEVANCE AND PRIORITY OF ARTIFICIAL INTELLIGENCE IN PARLIAMENTS

A partnership has formed among The Hellenic OCR Team and The Open Government Institute to jointly tackle the several research questions related with the use of AI in parliament. The Hellenic OCR Team is an innovative crowdsourcing initiative that was established in 2017 with the aim to process and study parliamentary data.[14] In 2022, the Team took the form of an international expert network now spanning across 14 countries in four continents. The Open Government Institute is part of the Zeppelin University and specialises, among others, in public sector informatics aiming at administrative data openness.[15] Particular issues that will be investigated in the course of this scientific co-operation include the challenges of application of legal and administrative informatics in parliaments, the framework for using emerging digital technology in legislatures and public accessibility of parliamentary data.

In the case of AI in the parliamentary domain, one of the biggest challenges in tackling the above issues is linked with the lack of reliable data. A gradual approach consisting of a *definition* and an *implementation step* was developed to obtain quality empirical data. Due to the COVID-19 pandemic, an on-line moderation tool was opted for data collection and recording, also important when having in mind a potential worldwide application.[16] The definition step was a one-off brainstorming activity of a small group of high-level experts to determine a detailed list of parliamentary tasks that may be influenced by AI. A total of 210 such tasks were defined and clustered into nine sectors (in alphabetical order): Civic Education and Culture; Framework; Legislation; Open Questions; Parliamentarians; Parliamentary Administration and Utilities; Parliamentary Bureau, Directorates and Elections; Parliamentary Control and Parliamentary Diplomacy; and Scientific Services.

[14] The Hellenic OCR Team Headquarters are in Greece. Accessed at: https://hellenicocrteam.gr.

[15] The Open Government Institute resides in Friedrichshafen, Germany. Accessed at: https://www.zeppelin-university.com/institutes/togi/.

[16] XLeap. Accessed at: https://xleap.net.

Table 1. Stakeholder participation per administrative unit and parliament for each exploratory workshop.

Unit/function	Hellenic Parliament (2021)	Chamber of Deputies of Argentina (2022)
Committees	●	
IT systems	●	●
International relations		●
Law-making and control		●
Library	●	
MPs and advisors	●	●
Political & administrative leadership		●
Press and TV	●	●
Project Management Unit	●	
Scientific Service	●	
Strategy Unit	●	

The implementation step included the organisation and holding of exploratory workshops in national legislatures (one at the time) to obtain empirical information from parliamentary stakeholders on the effect of AI on the above 210 tasks. These workshops include up to 15 stakeholders, such as Members of Parliaments (MPs) and/or their aides, parliamentary officials, scholars of parliamentary studies and parliamentary employees from diverse units. Table 1 highlights the administrative units of the stakeholders.[17] Two specific parameters were evaluated for each task, i.e. the relevance and priority of the related AI-based solution.

[17] The full names of the administrative units are not mentioned for comparability purposes. More generic unit descriptions are used instead in alphabetic order.

The reason that a preliminary step was needed in order to determine the target tasks that were subject to evaluation, was twofold. The first one has to do with the necessity for comparability of results from different institutions. The second is concerned with time limitations. For example, it is not conceived as practical and sometimes even as possible, to commit politicians and parliamentary professionals to long hours of deliberation in such workshops. Therefore, an upper limit of three hours was established. Another technical matter dealt with the actual evaluation process. Eventually, it was more pragmatic to allow workshop participants to evaluate tasks and competencies, rather than specific technologies.

The exploratory workshops took place twice, in the Hellenic Parliament in Athens, Greece (April 2021) and the Honourable Chamber of Deputies of Argentina in Buenos Aires (August 2022). On both occasions, their organisation was institutionally applauded and accompanied by positive participant feedback.[18] These workshops produced a wealth of data that offer particularly rich insights on how the individual parliaments approach AI.[19,20] The Australasian parliaments could assess these reports to decide upon implementing this method in their own realms, in order to learn more about their needs and collaboration prospects.

The results contain those proposals that should be considered for implementation in the coming years, when AI technologies in the parliamentary environment become more mature and commercialised. At present, the collection can help determining in which areas to focus research and where AI-based innovations urgently need to be applied towards more efficient and effective parliamentary processes. The study has also helped to make it clearer and easier to understand the upcoming changes and what specifically needs to be talked about when considering such an evolutionary step.

[18] The Honourable Chamber of Deputies of Argentina produced a short video on workshop implementation. Accessed at: https://diplab.hcdn.gob.ar/proyectos.

[19] F Fitsilis, J von Lucke & J Etscheid, 'Prioritisation of artificial intelligence technologies for the parliamentary workspace'. *Working paper at the 14th Workshop of Parliamentary Scholars and Parliamentarian*s, Wroxton UK, 30-31 July 2022. Accessed at: https://wroxtonworkshop.org/wp-content/uploads/2022/07/2022-Fitsilis-.pdf.

[20] J von Lucke, F Fitsilis & J Etscheid . 'Using Artificial Intelligence for Legislation –Thinking About and Selecting Realistic Topics'. *Proceedings of Ongoing Research, Practitioners, Workshops, Posters, and Projects of the International Conference EGOV-CeDEM-ePart 2022*. Linköping, Sweden, 6-8 September 2022. Accessed at: https://dgsociety.org/wp-content/uploads/2022/09/CEUR-proceedings-2022.pdf#page=46.

ADVANCING INFORMATION SHARING FOR AUSTRALASIAN PARLIAMENTS

One of many goals of AI application in parliament could be to make public data more useful for parliamentary stakeholders that originate within or outside the parliamentary workspace. These can be reached through several communication channels. The related processes can be considered a sub-topic of digital communications, which in the case of parliaments has been studied in detail.[21] For the sake of simplicity, the case of AI-based solutions for interparliamentary cooperation will be examined here more closely. This again can be linked directly with advancements in parliamentary diplomacy.[22]

To re-shape information sharing among parliaments requires strategies, methods, skills, as well as the necessary tools and services that do not yet exist in the context of interparliamentary cooperation. In the light of the discussion about AI, this attempt may involve the enhancement of several integral parts of the parliamentary communication process. For instance, parliamentary organisations need to embrace and meticulously utilise a 'data-first' approach. Without open, structured and validated data there can be hardly any trustworthy AI solution. Once there, digital communication strategies and concepts for advanced applications can be designed and implemented. These may include, for instance, messaging campaigns via social media for the propagation of specific parliamentary diplomacy goals. Furthermore, more elaborated communication efforts towards highly specific target groups may be conducted by using stakeholder profiling techniques taking into account any pertinent personal data protection regulations.[23] Other relevant AI-based applications may include semi-, fully automatic or conditional exchange of legal documents of regional context among Australasian parliaments whenever they are issued.

Heaving the above in mind, it quickly becomes apparent that AI and the related research about its application in the parliamentary workspace become significant. Previous studies in Europe (Greece) and Latin America (Argentina) started to produce

[21] See, indicatively, J Griffith & C Leston-Bandeira. 'How Are Parliaments Using New Media to Engage with Citizens?' *The Journal of Legislative Studies* 18(3-4) 2012, pp. 496-513.

[22] J d D Cincunegui, 'Parliamentary Diplomacy and the International Relations of Parliaments: Challenges and Opportunities in the Face of Digital Transformation', inF Fitsilis & G Mikros (eds), *Smart Parliaments, Data-Driven Democracy*. Brussels: European Liberal Forum, 2022.

[23] See e.g. the General Data Protection Regulation (EU) 2016/679 that applies in the European Union.

tangible results that can be turned into digital tools, services and policy proposals. Further research in the field is desirable, which could place Australasia in the foreground. This is because the main advantages from strengthening interparliamentary cooperation can be located at the regional scale. In the cases of Europe and Latin America, sampling would still involve a considerable number of legislatures, while in the case of Australasian parliaments the entire region could be covered with just two or three workshop sessions.

As Australasian parliaments might encounter resource limitations and shortage of know-how in the stand-alone development of advanced solutions for the interparliamentary cooperation, a joint large-scale research and development agenda on AI might be necessary. Such an agenda has to be regionally managed and should not only investigate the possibilities modern technology may offer but also all the side parameters and the policy framework to determine, design and implement an advanced interparliamentary cooperation toolbox at a regional scale. The establishment of such a network could include scientific experts, young scientists, AI developers and parliamentary practitioners. This approach additionally requires a lively intra- and transdisciplinary dimension, in which legislators, legal scholars, legal and administrative informaticians are to be integrated.

The design of the investigation can be based on the concept of explorative workshops described above. Potential interest from sub-national parliaments could also be accommodated but at a later stage, as the processing of their data would increase the level of analytic complexity. There are multiple advantages for the participating institutions. Not only do they take part in a study that can potentially advance the implementation of AI-based tools and services at a fraction of the cost, but also they have full access to the obtained data that can be used for the development of individual digital strategies and roadmaps.

Holding such workshops is certainly not a simple task. The Hellenic OCR Team and The Open Government Institute might prepare the backbone and handle the details of the implementation, yet the actual work needs to be done in-house by the interested parliaments. This involves the selection of the local contact point that will take over local organisation issues, including the selection and briefing of suitable workshop participants. Language is an issue when holding an intensive online survey. Should the original list of AI-based proposals in English not suffice, a translation in the native tongues needs to be conducted.

Once a series of workshops are held, comparative analyses will be able to determine and highlight local and regional preferences. Moreover, and perhaps most importantly in the context of regional interparliamentary cooperation, the prioritisation of relevant

solutions will enable their shared development, thus sharing the cost, risks and institutional engagement of individual parliaments. The resulting AI-based solutions will advance the parliaments of the region *en bloc* and can be linked with the creation of a parliamentary community of AI practice. Targeted use of economies of scale (e.g. via increased technical expertise across the aforementioned community of practice) and scope (e.g. by pipelining app development) can further lower implementation cost.

CONCLUSION

Australasian legislatures could be useful case studies for the investigation and development of the emergence of ground-breaking AI-based tools and processes. The research described above indicates that the know-how and tools are available to capture and evaluate AI proposals for parliamentary workspaces. These could lead to the formation of digital strategies and potentially advanced interparliamentary cooperation within the Australasian region and beyond. Most importantly, the institutions involved can narrow down candidate tools and jointly contribute to their development, thus limiting development costs and optimising the channelling of institutional resources. Further benefits and spin-off activities could include skill development; the determination of training needs; and the establishment of a regional community of practice involving intra and extra-parliamentary stakeholders.