EUI SCHOOL OF TRANSNATIONAL GOVERNANCE

STG Policy Papers

POLICY BRIEF

NEITHER FISH NOR FOWL: THE CHALLENGES OF A DEMOCRATIC AI

Authors:

Lucia Bosoer, Marta Cantero Gamito, Ioannis Galariotis and Daniel Innerarity

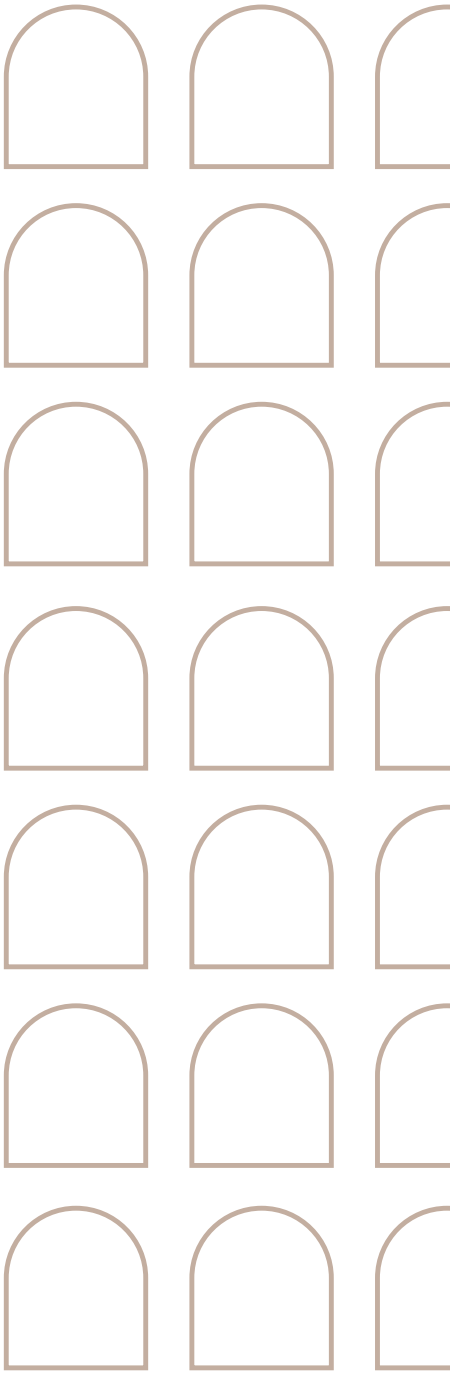
School of Transnational Governance

ISSUE 2022/30
NOVEMBER 2022

EUI SCHOOL OF TRANSNATIONAL GOVERNANCE

EXECUTIVE SUMMARY

In the current era of rapid technological advancements and big data evolution, one important question revolves around whether the growing development and use of artificial intelligence (AI) systems and their penetration through our societies constitute a threat to our political systems. Are AI systems better equipped to provide unbiased solutions to political problems compared to the biased human reasoning? Despite the several positive dimensions that AI has brought to our societies, crucial challenges for our democracies have been emerged. However, it would be unwise to immediately reject or fear about the solutions that AI is bringing into politics. In that respect, it becomes necessary to critically investigate and examine thoroughly what original solutions and benefits those AI systems are offering to the political world. Politics is a course of action that is not based on a type of linear and deductive reasoning or some sort of techniques that could optimally minimize situations under uncertainty; it serves to make decisions in the midst of great ambiguity and contingency. Therefore, democratizing AI would be a solution to make AI work for our democratic societies.



Author:

Lucia Bosoer| EUI School of Transnational Governance
Marta Cantero Gamito | EUI School of Transnational Governance
Ioannis Galariotis | EUI School of Transnational Governance
Daniel Innerarity | EUI School of Transnational Governance

1. INTRODUCTION

In the current era of rapid technological advancements and big data evolution, one important question revolves around whether the growing development and use of artificial intelligence (AI) systems and their penetration through our societies constitutes a threat to our political systems. While experts are still trying to agree on what AI is and what it is not, AI is emerging as a ubiquitous element in our daily lives, and we should waste no time in making a stand. Techno-pessimists tend to see AI as a disturbing force that challenges the future of our democracies[1]. The main threat of AI to democracy is that AI will soon (if not already) substitute the democratic processes, leaving seemingly unbiased algorithms to decide for the majority of the political complexities of our societies. Techno-enthusiasts, on the other hand, tend to believe that increased information and AI could contribute to relieving most of the problems of our society, including the complexity of politics and their (in)efficient management.[2] Their main argument is that AI algorithms can formulate optimally better decisions than humans in politics. Despite these contrasting ideas, both seem to share the idea that technology and AI could become a significant element of politics, and even replace politics entirely in several cases. However, how ready are the 'new' AI solutions, to replace 'old' political recipes? And, more than that, should traditional politics fully reject or partially compromise to the proposed AI political solutions? What does it mean to have a democracy in an AI-mediated environment and, consequently, is it possible to democratise AI?

2. CHALLENGES FOR DEMOCRACY

2.1 Concentration of curation power

There is an inherent paradox in the tech development field: the very same technology that allows the intensification of citizens' voices (see, for example, how the Arab Spring was spread back in 2011) is also capable of filtering and even manipulating public opinion with alarming consequences for democracy (for example, consider the case of Cambridge Analytica). Threats to democracy escalate in highly concentrated online markets where only a few dominant platforms channel public discourses. Perhaps one of the most prominent examples of this phenomenon came in January 2021, after the U.S. Capitol attack, when Twitter decided to suspend the account of then President Donald Trump to prevent further escalation of violence.[3] Although curation is a by-product of platform businesses, there is a problematic lack of understanding of how platforms manage and filter content, especially when moderation is automated.[4] However, despite controlling news and political exposure, platforms are not yet subject to the rules that apply to the editorial control exercised by traditional media.

2.2 Concentration of economic power

A business model based on the increasing extraction, accumulation, and processing of data, coupled with a poorly regulated environment, has allowed a few technology companies to accumulate a concentration of power without precedents in human history. The GAFAM oligopoly - Google (Alphabet); Apple; Facebook (Meta); Amazon; and Microsoft - has a combined total market capitalization valuation larger than the combined Gross Domestic Product (GDP) of some of the world's richest countries.[5] The concentration of economic power in a few tech companies raises questions related to the democratic nature of much of what happens in the digital sphere, as well as the influence of these companies in public decision-making. This has led some authors to suggest a scenario in which states, as the basic unit of the international order, would be losing relevance vis-à-vis big tech companies.[6]

2.3 Surveillance

1 Webb, Amy (2019) *The Big Nine: How the Tech Titans & their Thinking Machines could Warp Humanity.* Public Affairs.
2 Helbing, Dirk (2015) *Thinking Ahead: Essays on Big Data, Digital Revolution, and Participatory Market Society.* Springer.
3 Twitter 'permanently suspends' Trump's account. (2021). *BBC.* Available at https://www.bbc.com/news/world-us-canada-55597840
4 Gillespie, Tarleton (2018). *Custodians of the Internet: Platforms, content moderation, and the hidden decisions that shape social media.* Yale University Press.
5 Mirrlees, Tanner (2020). Getting at Gafam's "Power" in Society: A Structural-Relational Framework. HELIOTROPE. Available at https://www.heliotropejournal.net/helio/gafams-powerin-society
6 Bremmer, Ian (2021). The Technopolar Moment. How Digital Powers Will Reshape the Global Order. *Foreign Affairs.* Available at https://www.foreignaffairs.com/articles/world/2021-10-19/ian-bremmer-big-tech-global-order

Advances in technology have made it possible to constantly monitor individuals, in every facet of everyday life, from tracking on social media, likes and e-commerce records to geographical location and face recognition, human activity can be traced both online and offline. One of the main problems of this increased surveillance is that citizens are often not aware that this monitoring is taking place, challenging the understanding and limits of how individual liberties are to be exercised in a context of widespread monitoring. The growth of surveillance technologies and the data and information that accumulates from this, feeds untransparent and often flawed algorithms. This is problematic for three reasons. First, data collection happens without regard for data protection rights.[7] Second, the use of technology for law enforcement purposes is, to date, of disturbingly low accuracy.[8] And third, it raises questions as to the geopolitical implications of the use of surveillance technologies, fuelling debates about data sovereignty.

2.4 Discrimination

It has been shown that AI-driven profiling and decision-making are biased against certain ethnic and minority groups.[9] The design of these systems requires removing any form of discriminatory unfairness in order to avoid perpetuating biases but also to preserve trust. In countries of the Global South, many of which face a long history of corruption, discrimination, police abuse and injustice, the situation becomes even more worrying, as there are no mechanisms in place to prevent – or redress – these technologies from further exacerbating existing problems. In addition to the question of whether it is possible to develop algorithms that are bias-free, other key issues then are whether we are facing a problem of technical resolution, whether biases in technology are simply a reflection of human behaviour, or whether we are facing an age-old problem that technology has helped to exacerbate.

2.5 Vulnerability

With regard to vulnerability, we shall pay attention to the evolving role of the Internet over time, becoming a crucial infrastructure for social inclusion. While the first digital divide is narrowing thanks to public policies that target the most vulnerable sectors, as well as lower costs of access to technology, the second digital divide is becoming increasingly relevant. This is related to the lack of digital skills and refers to those people who, despite having access to devices, do not have the necessary knowledge to use them. Moreover, other vulnerable actors such as minors are intentionally exposed to inappropriate or even harmful content,[10] especially by those companies whose business models are based on data extractive practices and that use children to create content for online platforms.[11] Screen time is increasing, making it very difficult to control what children watch online.[12] Lastly, general human vulnerabilities are exploited by businesses that benefit from our intrinsic human need to socialize and to find new information. The Internet radically changed our capacity to access information. As a result, we started to increase our 'connected time' while ignoring that our online interactions were progressively monitored and monetized.

2.6 Big data (mis)use in government

Private companies have been long exploiting the efficiencies generated with the use of big data technologies in their internal processes. This has resulted into better predictions, anticipating the market's demands, as well as a better understanding of specific users'/consumer's needs and preferences. However, while companies are mastering the cues of

7 The Guardian (May 22, 2022), UK watchdog fines facial recognition firm £7.5m over image collection, available at https://www.theguardian.com/technology/2022/may/23/uk-data-watchdog-fines-facial-recognition-firm-clearview-ai-image-collection.

8 Sharman, Jon (2018). Metropolitan Police's facial recognition technology 98% inaccurate, figures show. The Independent. Available at https://www.independent.co.uk/news/uk/home-news/met-police-facial-recognition-success-south-wales-trial-home-office-false-positive-a8345036.html

9 Žliobaitė, Indre (2017). Measuring discrimination in algorithmic decision making. *Data Mining and Knowledge Discovery*, *31*(4), 1060-1089.

10 The Guardian (January 23, 2021), *Italy blocks TikTok for certain users after death of girl allegedly playing 'choking' game*, available at https://www.theguardian.com/world/2021/jan/23/italy-blocks-tiktok-for-certain-users-after-death-of-girl-allegedly-playing-choking-game.

11 It has been found that ad companies collect more than 72 million data points about a child by the time (s)he reaches 13 years old. The Washington Post (June 9, 2022), *Your kids' apps are spying on them*, available at https://www.washingtonpost.com/technology/2022/06/09/apps-kids-privacy/.

12 Data shows that kids ages 8-18 spend, on average, about 4.5 hours/day in front of a screen for entertainment purposes. In teenagers, the average is above 7h/day. *2019 Common Sense Census: Media use by tweens and teens* (2019), available at https://www.commonsensemedia.org/sites/default/files/research/report/2019-census-8-to-18-full-report-updated.pdf

our online behavior, states are not utilising the knowledge accrued by big data to work toward better policymaking. Large databases are a significantly valuable tool for developing proactive public policies, providing more efficient services and promoting economic activity. However, those in charge of the generation and use of such databases, as well as the implementation of AI systems in the various areas of public administration - health, education, and security, among others - are often not aware or misleadingly disregard or not trained to understand the consequences that these tools can have.[13] The dangers of misuse of data and predictive algorithms, such as profiling or biases that lead to the perpetuation of situations of inequality and social injustice, probably outweigh their benefits.

3. IS THERE ROOM FOR HOPE? POSITIVE DIMENSIONS OF AI

Due to our reasonable anxiety towards the advent of robotics and automated decision-making, we often neglect (or simply ignore) that there are already positive applications and implications of the technology that bring about advances significantly contributing in solving some of the most pressing problems of democratic societies.

3.1 Information / disinformation

AI has made it possible to access all available data platforms. Every day we can go online and collect information about the relevant and current political incidents in real time. On the other hand, democratic systems need to be flooded by information and news that are truthful and correct so that the citizens can be informed about the course of a government and what the plans and actions of policy-makers are for the development of a society. The widespread use of social media and other digital platforms over the last decade has been equated with new technological possibilities that have allowed disinformation and fake news to spread in greater volumes and much faster throughout the world. Nowadays, it is common to hear that citizens are overwhelmed by a large number of available news and social platforms, and no longer know whether or not to trust the information they are exposed to. AI systems designed to detect fake news from the real ones can help minimize our exposure to disinformation[14], therefore preserving the healthy functioning of democracy.

3.2 Provision of an open political space

AI advancements have created the necessary technological tools for providing space to all citizens to voice and share political messages and individual opinions. The Internet provides an open political platform where a plurality of arguments and opinions is available for criticism, review and further exploration. In this respect, online users become recipients of different political ideas and can choose among the best arguments, exchange different viewpoints and build consensus. This is of crucial importance to the viable functioning of a democracy because citizens can make their informed decisions based on a variety of political ideas, improve their political knowledge from the richness of arguments and contribute to decision making for better organisation of their societies.

3.3 The State and the Citizen

The relationship between the state and the citizen has traditionally been conceived as an imbalanced one. In today's bureaucracy, the paperwork, waiting times, queues, and day trips to larger cities to deal with certain administrative and bureaucratical procedures non-available locally might soon become something of the past. In Estonia, for example, there are about 50 AI use cases, non-fully automated, for the provision of public services. One of these schemes, used in the employment sector, provides recommendations of educational and skills needs to minimise predictors of long-term unemployment. A speech recognition tool, HANS, is used to simultaneously transcribe discussions in the Estonian Parliament. Other cases include identification and automated tagging for better information as well as virtual and voice-assisted technology for the provision

13 Nowotny, Helga (2021). *In AI We Trust: Power, Illusion and Control of Predictive Algorithms*. John Wiley & Sons.
14 See, for example, the FANDANGO project: https://ec.europa.eu/research-and-innovation/en/horizon-magazine/can-artificial-intelligence-help-end-fake-news

of public services (Bürokratt).

While there is room for improvement, the digitalization of the public administration is showing that, in the medium-long run, advantages can outweigh disadvantages. To this end, a primary principle shall be respected: procedural guarantees must be replicated. This, however, requires rethinking the relationship state-citizen and to reflect about what democracy means in the age of AI. What does 'democratise' AI mean? Can we replicate the features of democracy in a complex and non-linear world where politics are mediated through (imperfect) technology?

4. DEMOCRATISING AI: POLICY RECOMMENDATIONS

The relationship between AI and democracy as a strained one and, as such, engaging in the debate about whether AI is good or bad for our democracies should be a necessary step in the further development and use of AI[15]. It is worth asking how we could democratise AI and how we can accommodate it in our societies. But what precisely does it mean to 'democratise' AI? Although its meaning does not seem to be clear or consensual, it is possible to identify different approaches and policy recommendations:

1. **Improve access to technology:** Most segments of our society, including the very elderly as well as those who are economically and socially vulnerable, should have access to technology and the tools of AI. If this is not ensured, AI will only contribute to deepening the growing inequality gaps between those who have access to technology and those who have not, as well as those who know how to use and exploit AI and those who do not. Governments and private companies should ensure that technology and AI are widespread accessible to the public with user-friendly environments and without increasing usage costs.

2. **Debate AI in the public sphere:** Democratizing AI could also imply fostering greater public debate about the opportunities and challenges of the technology, about which applications it will and will not be used for, and about why the decision is justified in each case. The idea of broadening the conversation about a technology that is increasingly present in our environments and daily routines, yet ignored by a large part of our societies, is in turn related to the need to foster a more informed and engaged citizenry. Here, synergies among the policy-making world and academia are important to communicate the benefits and use of AI in large parts of our societies.

3. **Greater transparency:** The democratization of AI could also be conceived through fostering greater transparency and guaranteeing democratic oversight of these systems. This is particularly important with systems deployed in public spaces, as in the case of facial recognition cameras, but also in other spaces operated by private structures which, however, increasingly play the role of public spheres. On this front, there are many initiatives on which further progress can be made: improving the protection of personal data and ensuring the possibility of opting out, fostering oversight of algorithm design, implementing algorithmic impact assessments and algorithmic auditing, as well as monitoring compliance with existing regulation.

4. **Challenge and define the basis of democracy:** A fourth approach to the question of what it means to democratise AI is based on the flexibility and changing nature of our democracies. In this respect, democratizing AI implies rethinking the concepts constituting the basis of democracy-i.e., citizenship, human rights, equality, freedom, privacy - and that are transformed and acquire new meanings in a context mediated by AI. The role of universities and the civil society is necessary in fostering this debate and reaching out most segments of our societies.

5. **AI as a solution in democratic systems:** Finally, if we consider democracy not as something stable but as something that is

15 Sætra, Henrik Skaug, Borgebund, Harald, & Coeckelbergh, Mark (2022) 'Avoid diluting democracy by algorithms', *Nature Machine Intelligence*, 4, 804-806.

constantly evolving and under construction, then we can think of AI as an enabler to improve our democratic systems. In many ways, AI is pointing out problems that have long characterized democratic governance and to which we were not able to pay attention before. A more optimistic view of algorithmic biases, for example, points out that, although social biases have always existed and thus always functioned as a conditioner of the actions and decisions of public officials, we are only now beginning to be concerned about them. AI, in this sense, could help not only to identify the weaknesses of our democratic governance, but also to devise innovative solutions to them.

5. CONCLUSION: TOWARDS AN EPISTEMIC DEFENCE OF A DEMOCRATIC AI?

It would be unwise to immediately reject or fear about the solutions that AI is bringing into politics. At the same time, though, it becomes necessary to critically investigate and examine thoroughly what original solutions and benefits those AI systems are offering to the political world. Politics is a course of action that is not based on a type of linear and deductive reasoning or some sort of techniques that could optimally minimise situations under uncertainty; it serves to make decisions in the midst of great ambiguity and contingency. Therefore, it is highly questionable whether AI and automation can take over democratic decision-making processes. Algorithms and their maximization-minimization processes, when presented as indisputable objectivities, tend to erode the basic assumptions of democratic pluralism and the diversity of subjective realities and ideological diversity of the democratic space. If we understand the democratic world as an independent reality without any pluralistic interpretation of the reality, then AI algorithms would fit perfectly to this world, but democracy itself would become meaningless. Therefore, we cannot easily accept the assumption that already tested effective recipes based on AI data-driven approaches can fit the pluralism that characterizes democratic procedures. Here, there is a sort of an epistemic confusion in the sense that ways of thinking that make perfect sense in one field and are admired for their precision are extrapolated to others where they can only produce distortions of reality.

The fundamental difference between humans and machines lies in the type of reasoning concerning how decisions are made and where critical thinking and contextual factors are forming those processes.[16] Algorithms seem to decide with relative ease when it comes to "if... then" decision trees. But, most of the political decisions cannot be listed in the binary categories or, any other algorithmic procedure serving to reduce complexity and provide optimal solutions to uncertainty. If humans routinely navigate situations of ambiguity, it is because we take the context into account; something that an algorithm cannot easily capture. As an expert of predictive statistical modelling has suggested: "The numbers have no way of speaking for themselves. We speak for them. We imbue them with meaning. Like Ceasar, we may construe them in self-serving ways that are detached from their objective reality".[17] This uniqueness of politics creates a distinction between what is the nature of politics and how the algorithmic logic can deal with it, which demands clarity, objectivity and precision. By acknowledging this, we can realize the real limits of any algorithmic treatment of political affairs, but also the foundation of democracy.

16 Webb, Amy (2019) *The Big Nine: How the Tech Titans & their Thinking Machines could Warp Humanity.* Public Affairs.
17 Silver, Nate (2020) The Signal and the Noise: Why so Many Predictions Fail – but Some Don't (Penguin Books), p.9

The School of Transnational Governance (STG) delivers teaching and high-level training in the methods, knowledge, skills and practice of governance beyond the State. Based within the European University Institute (EUI) in Florence, the School brings the worlds of academia and policy-making together in an effort to navigate a context, both inside and outside Europe, where policy-making increasingly transcends national borders.

The School offers Executive Training Seminars for experienced professionals and a Policy Leaders Fellowship for early- and mid-career innovators. The School also hosts expert Policy Dialogues and distinguished lectures from transnational leaders (to include the STG's Leaders Beyond the State series which recorded the experiences of former European Institution presidents, and the Giorgio La Pira Lecture series which focuses on building bridges between Africa and Europe). In September 2020, the School launched its Master-of-Arts in Transnational Governance (MTnG), which will educate and train a new breed of policy leader able to navigate the unprecedented issues our world will face during the next decade and beyond.

The STG Policy Papers Collection aims to further the EUI School of Transnational Governance's goal in creating a bridge between academia and policy and provide actionable knowledge for policy-making. The collection includes Policy Points (providing information at-a-glance), Policy Briefs (concise summaries of issues and recommended policy options), and Policy Analyses (in-depth analysis of particular issues). The contributions provide topical and policy-oriented perspectives on a diverse range of issues relevant to transnational governance. They are authored by STG staff and guest authors invited to contribute on particular topics.

School of Transnational Governance
European University Institute
Via Camillo Cavour 65, Firenze, FI 50129
Email: stg.publications@eui.eu

www.eui.eu/stg

Co-funded by the
Erasmus+ Programme
of the European Union

The European Commission supports the EUI through the European Union budget. This publication reflects the views only of the author(s), and the Commission cannot be held responsible for any use which may be made of the information contained therein.

doi: 10.2870/81475
ISBN: 978-92-9466-334-4
ISSN: 2600-271X
QM-BA-22-030-EN-N