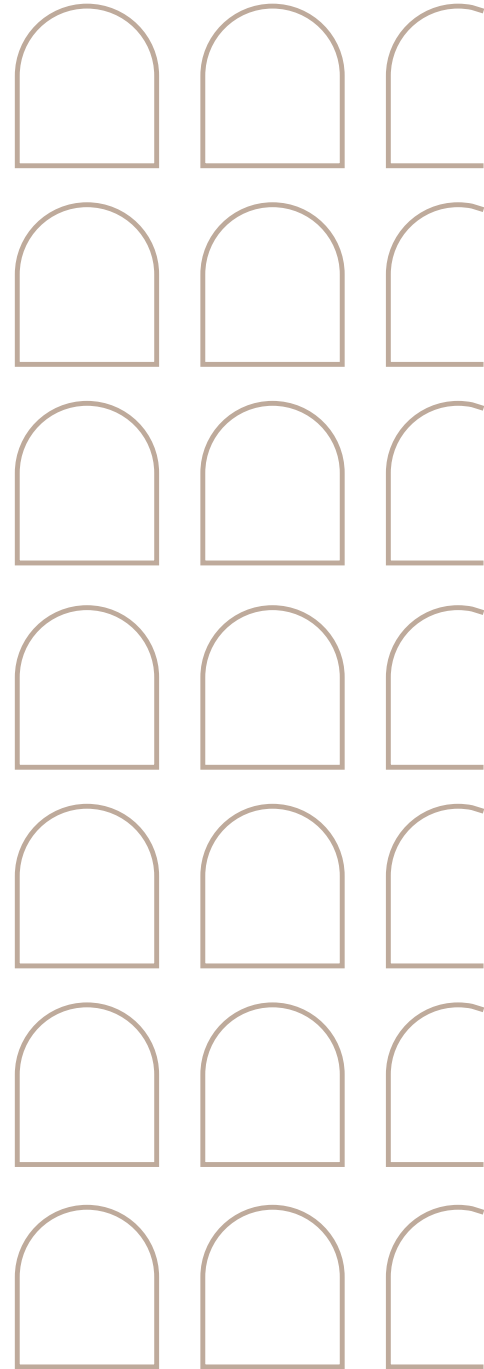STG Policy Papers

POLICY BRIEF

IS ARTIFICIAL INTELLIGENCE THREATENING DEMOCRACY?

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EXECUTIVE SUMMARY

In a democracy, human beings make decisions with the aim of serving the will of the people and promoting the collective welfare of society. While machines can learn from data and generate potential democratic solutions, they fall short in grasping the intricacies of the subjective reality of democratic politics. Entrusting Artificial Intelligence (AI) systems with decision-making carries the risk of following optimal solutions shaped by falsified objective realities that AI algorithms aim to optimise. Even if the data were comprehensive and sufficient, modelling approaches struggle to fully encapsulate the complexities of subjective realities within global democracies and societies. In essence, leaving democratic politics to be governed by ostensibly logical AI classifiers is a significant gamble. In the second high-level policy dialogue that took place on the 22 and 23 of May 2023 in Florence under the auspices of the STG Chair in Artificial Intelligence and Democracy, scholars and policymakers discussed and shared their ideas to map multiple available solutions for how democratic politics can live with an AI-powered world and, more than that, how AI can turn to a beneficial tool for democracy. Most of the participants agree that AI can be formed and transformed to a useful tool for democracies. In this policy brief, we summarise the key ideas that emerged from the discussions in this high-level policy dialogue.

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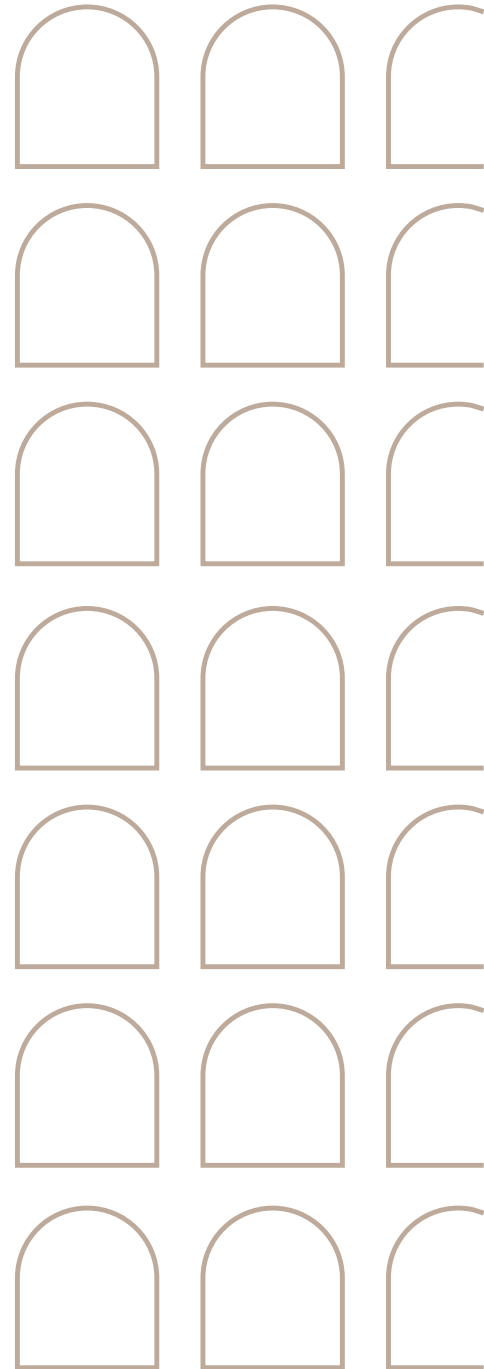
1. LIVING IN THE AREA OF ALGORITHMS

In the past decade, Artificial Intelligence (AI) has become a frequent topic in newspapers, research articles, online blogs, opinion pieces, TV news, political discussions, academic departments, and various other sources. AI is mentioned in almost everything we read, study, watch, or listen to, as it has found numerous applications in our daily lives. This widespread discussion of AI is mainly due to significant advancements in technology and AI systems over the last ten years. Few other fields have expanded as rapidly as AI in human history. AI stands as the dominant force, while humanity and societies primarily observe without the capability to keep pace or compete. In the words of Pedro Domingos, "we are living in the age of algorithms" (Domingos, 2015). AI systems have flourished recently, thanks to advancements in computer science and the availability of data. This has enabled the widespread integration of AI algorithms into our everyday routines. From the moment we wake up to when we go to bed, AI algorithms assist us in managing our various daily tasks. For instance, AI algorithms verify our credit or debit card payments when we shop at the supermarket and help filter out spam emails. When driving, AI technologies aid us in reaching our destination accurately, avoiding risky road manoeuvres, and providing alerts when other vehicles approach.

An important question that arises is whether AI development has limits or will continue to expand indefinitely. Is there a clear endpoint, or will new advancements keep emerging from the AI field? It's undeniable that AI has brought about numerous positive effects, as noted by Russell in 2019. One significant advantage is automation, simplifying everyday tasks with the push of a button. Machines are here to handle time-consuming activities in various industries. For instance, in car factories, automated machines and robots produce new vehicles. In healthcare, doctors use AI to gather patient data for better diagnoses and more efficient treatment decisions. Many administrative tasks in offices have been significantly reduced through AI systems. In addition to automating repetitive tasks, AI plays a vital role in reducing human errors. Machines are quicker and more accurate than humans. Multi-tasking has become a reality thanks to the efficiency AI brings to the workplace. Furthermore, AI operates 24/7 without the need for rest or experiencing fatigue. Predictive capabilities are another key feature. Despite occasional failures, AI algorithms generate reliable predictions, from weather forecasts to civil war forecasting and even customer preferences. In the case of customer preferences, some analysts have begun discussing the concept of "algorithmic anxiety," where machine-generated recommendations can closely mimic our preferences with the goal of encouraging us to purchase items we might not otherwise buy (Chayka, 2022).

Recently the ChatGPT was launched with impressive capabilities. Simple tasks can now be done quickly with OpenAI's advanced generative AI algorithm. It seems that, in the near future, robots may start taking over everyday tasks, which could become a reality. Whether this shift will have negative impacts on our society and interactions is uncertain. What we do know is that AI technology is advancing rapidly and consistently.

2. IS AI THREATENING DEMOCRACY?

In this era of rapid technological progress, the following questions deserve more attention: Do the growth and integration of

AI systems into our societies pose a threat to the functioning of our democratic political systems (Bosoer et al., 2022)? Will AI machines eventually replace humans in making democratic decisions, or are there limitations to what AI systems can do and think? Proponents of technology and AI often argue that increased access to information and machine learning can help address many of society's problems, including the complexities of politics and their efficiency. The core idea is that machine learning algorithms can make better political decisions than humans, and this belief extends to the notion that, in the current age of abundant data and technological innovation, these AI-driven decisions are not only more optimal but also faster, more rational for the greater good of society, and less biased. As a result, the deficiencies of traditional politics in solving various political issues can be replaced by AI data-driven approaches that are more efficient and effective. However, the questions remain: to what extent are these new AI data-driven solutions capable of replacing traditional political approaches, and in which areas of politics? Should democratic politics, as we have known it for decades, entirely give way to AI-driven political doctrines, or should there be a partial collaboration between the two?

Two major threats to democracy

a) Adoption of an objective political reality

Transitioning from subjective to objective reality involves developing AI systems using vast and diverse daily data, including text, numbers, videos, and images from social media and other sources. AI systems learn from these inputs to generate intelligent responses. The crucial question is: who determines if the data accurately mirrors our daily reality? No one can provide absolute assurance due to the abundance and limitlessness of data. Even if we could verify and test the data used by AI systems, we cannot fully inspect and reproduce the underlying code of these systems. A minor human error in the code could compromise the machine's intelligence or, even worse, create a reality based on flawed code (Gawdat, 2021). Additionally, while a certain bunch of code can be carefully designed, it's not the sole code for creating reality; AI systems' codes can potentially generate numerous different realities. This raises the pressing question of who controls these realities and which one most closely aligns with the reality experienced by humans. These questions lack clear answers because the realities we experience are, fundamentally, social constructs. In light of these challenges, it remains unclear how AI systems can approach these constructed realities and potentially replace humans in various aspects of the democratic decision-making process.

Modern societies are facing a significant demand for the mobilisation of knowledge, more precise analytical tools, and more efficient administrative infrastructure. However, the ability of AI "smart" systems to effectively manage democratic decision-making processes and their diversity is a subject of debate. AI machine learning algorithms primarily function as optimization models, which can sometimes overlook the fundamental principles of democratic pluralism and the wide range of subjective perspectives. If we view the democratic space as a uniform objective reality for all individuals, we risk neglecting the richness and complexity of social life and democratic processes. In a world devoid of subjectivity, AI's objective realities may offer optimal solutions to well-defined problems. Nevertheless, democratic decision-making is not solely about maximising or minimising particular aspects. It is reasonable to acknowledge that, in certain cases, evidence and AI systems can provide viable

solutions to various political disputes. Therefore, when political complexity arises within the democratic space, democratic decision-making processes should be open to incorporating AI optimization techniques. However, more often than not, even plans and solutions grounded in sophisticated scientific evidence and modelling approaches may not align with the diverse interpretations of pluralistic democratic realities and their complexities. Machines can never fully replace human beings because they lack emotions, the capacity for critical thinking, and operate within an objective reality, in contrast to the inherent subjective reality of humans. Machines are bound by the data they gather and are incapable of thinking beyond the confines of their programmed parameters. While they can be provided with alternative constructions and realities, their approach is primarily based on constrained optimization, limiting their ability to make decisions in broader contexts (Innerarity, 2023). In contrast, human decision-making is influenced by the social constructs of the unique realities they imagine and create. This social construction varies significantly from one individual to another, whereas machines tend to approach problems in a more uniform manner.

The real danger to democracy lies in the misconception that the intricate nature of political democratic pluralism can be simplified into a small set of processes that an AI system can optimise. AI algorithms are fundamentally designed for clustering and minimising scales, aiming to group together similar evidence so that an AI optimizer or classifier can provide solutions based on fewer clusters (essentially, the same groups of data) than complex systems with multiple social outliers. Many AI classification models create binary clusters, such as 0 and 1, because binary data is more adaptable and easier to model. However, can the complexity of political reality truly be reduced to a mere binary categorization of 0 or 1? The inclination toward scale minimization poses a significant threat to the diversity of the democratic world. This is because it forces individuals to think, interact, and adopt an objective reality dictated by AI logic, rather than allowing them the freedom to make choices from the vast spectrum of options that the democratic space provides. When humans consistently explore solutions in the realm of political ambiguity, it's because we take into account the context and the social construction of our subjective world. These are aspects that an algorithm or data analytics may struggle to capture. While the idea of eliminating uncertainty and complexity in the political world through AI systems is appealing and promising in terms of efficiency and speed, it also has its downsides. A significant portion of alternative political decisions could be excluded from the political landscape that a machine learning model can comprehend and address.

b) *Diminished citizen engagement in politics*

The notion of replacing politics with AI algorithms, based on the supposedly objective reality they generate, rests on a fallacy. The primary argument in favour of this replacement is that AI systems, regardless of their type or logic, are seen as more advanced, intelligent, and efficient tools for addressing the complexities of daily life. Algorithms can perform billions of computations in a second, whereas the human brain can only manage a limited number of logical thoughts and calculations. Therefore, a fair issue of consideration would be: why not replace human involvement in politics with an optimal AI classifier that can perform the same tasks (and even more) faster and more effectively?

As AI systems become more efficient and sophisticated, the allure of relying on them for tasks like responding to emails, writing reports, and designing business plans has grown. Indeed, AI systems like ChatGPT have the potential to assist with such tasks and improve efficiency and, perhaps, productivity. In politics, while efficiency and speed are important, there are concerns about AI dominating decision-making. Depending too much on AI for routine tasks may lessen human critical thinking and problem-solving skills. It's crucial to find a balance to ensure people continue using their cognitive abilities. If individuals disengage from day-to-day democratic processes and let AI algorithms make decisions, there's a risk of being governed by automated approaches. This might reduce active participation in politics, potentially undermining democratic principles. Democracy thrives on citizen engagement, and relying solely on AI could weaken this foundation, leading to potential de-democratization with significant consequences for democratic societies.

3. POLICY RECOMMENDATIONS: HOW CAN DEMOCRACY SURVIVE IN AI DOMINATED WORLD?

The participants at the high-level policy dialogue in Florence outlined three key conditions for successfully transforming AI into a tool for democracy:

1. **Participatory AI**: AI systems should complement and enhance democratic processes rather than replacing them. Their role should be to support and inform decision-makers, empowering them to make more informed choices while maintaining the active involvement of citizens.
2. **Power Distribution**: Societies, governments, and legal frameworks should work to prevent the concentration of power in the hands of a few dominant players. Ensuring a fair and balanced distribution of power among various social actors helps prevent the formation of monopolistic structures that can undermine democratic principles.
3. **Complexity and Subjectivity**: The design of AI systems should recognise the complexity of the social world and the subjective realities of human beings. Emphasising efficiency alone can oversimplify the intricate dynamics of society and the diversity of human perspectives. AI should be developed with an appreciation for the richness and complexity of human experiences.

By adhering to these conditions, AI can play a constructive role in strengthening democracy, fostering transparency, informed decision-making, and public engagement, while guarding against the potential pitfalls associated with the unchecked influence of AI technology in democratic processes.

During the high-level policy dialogue in Florence, participants suggested specific ways in which AI could support democracy:

- **Development of a robust legal framework:**
Creating a strong legal system is essential to make sure that AI benefits democratic governance while respecting ethics, human rights, and social values. This system sets the rules for using AI responsibly and ethically. Initiatives like the Universal Guidelines for AI, introduced by The Public Voice in 2018, play a crucial role in forming a worldwide agreement on AI ethics and rules. Besides local laws, it's equally important to have international collaboration and models for AI regulations that go beyond borders. Since AI

technologies affect the whole world, countries need to work together to handle their impact effectively. These international/transnational models can ensure consistent ethical standards, data privacy, and accountability globally. By establishing comprehensive legal frameworks at both national and international levels, societies can enjoy the advantages of AI while protecting democratic values, human rights, and ethical principles.

- **Promotion and maintenance of "agile" governance**

To ensure effective governance in the rapidly evolving realm of AI and emerging technologies, governments should adopt "agile" governance mechanisms. These mechanisms involve quick adaptation to technological changes and their societal impacts. Here are key components of agile governance:

o **Continuous Monitoring**: Governments must establish systems to continuously monitor AI developments and their societal impacts. This includes staying updated on advancements, potential risks, and ethical considerations. Regular assessments are essential to promptly address emerging issues.

o **Risk and Ethics Assessments:** Conducting assessments for the risks and ethics of AI applications is crucial. These evaluations help identify potential harms and ethical dilemmas, guiding the development of regulations and guidelines to mitigate risks and ensure responsible AI use.

o **Sandboxing:** By implementing sandboxing, controlled experimentation with AI technologies can take place in a secure environment. This proactive approach empowers policymakers to comprehend the real-world impact of the technology, facilitating informed

decision-making based on practical experience.

o **General Literacy Programs:** Promoting literacy programs on AI and emerging technologies is crucial. Educating the public and decision-makers about AI's capabilities and limitations, societal implications, and ethical considerations ensures informed decision-making and responsible use.

By incorporating these agile governance mechanisms, governments can effectively navigate the dynamic landscape of AI, fostering innovation while safeguarding societal interests and ethical principles. This approach enables quick responses to emerging challenges and opportunities in the AI ecosystem.

- **Formulation of AI-supported deliberation**

Utilizing AI-supported deliberation is a significant advancement in leveraging AI to improve democratic processes. Here's how AI can enhance democratic deliberation:

o **Aggregating Views:** AI systems efficiently gather a wide range of views and opinions from diverse participants, ensuring a more comprehensive representation of the population.

o **Sentiment Analysis:** AI performs large-scale sentiment analysis, offering insights into public sentiment and opinions on various issues. This aids decision-makers in understanding public perceptions.

o **Incorporating Outlier Views:** AI identifies and includes outlier views, ensuring diverse perspectives are considered in the deliberation process.

o **Argument Clustering and Summarization:** AI clusters and summarises arguments made during deliberations, making it easier for

participants and decision-makers to grasp key points and nuances.

o **Strength Measurement:** AI systems evaluate the strength and validity of arguments and opinions, providing a more informed basis for deliberation.

o **Consensus Coordination:** AI helps coordinate and facilitate consensus building across different groups and stakeholders, facilitating finding common ground and making collective decisions.

The use of online platforms for AI-supported deliberation has gained popularity in political parties, civil society groups, and social movements. These platforms engage citizens in democratic politics, offering a more inclusive and efficient way to deliberate on important issues and make informed decisions. In this context, AI facilitates a richer, more diverse, and more productive democratic dialogue.

- **Bringing nodality to the centre of the democratic process**

The concept of nodality, as outlined by Hood and Margetts in 2007, underscores the importance of robust information networks in modern democracies. By leveraging nodality, governments and citizens can enhance their collaboration, improve the quality of governance, and strengthen the foundations of a transparent and accountable democratic system. By prioritising nodality, several advantages can be realized:

o **Efficient Governance:** Nodality empowers governments to operate efficiently and make informed decisions. It enables the timely reception of information, allowing governments to respond more effectively to the needs and concerns of citizens.

o **Transparency and Accountability:** Nodality enhances transparency as citizens can access information about government actions and policies. This increased transparency, in turn, fosters accountability as citizens can hold their governments responsible for their actions.

o **Direct Participation:** Nodality promotes direct citizen participation in democratic governance. It enables citizens to engage actively in the decision-making process, offer their insights, and contribute to shaping policies that affect them.

o **Retrospective Assessment:** Nodality allows citizens to review past government actions and decisions with the benefit of hindsight. This retrospective assessment is crucial for holding governments accountable for their past actions and improving future governance.

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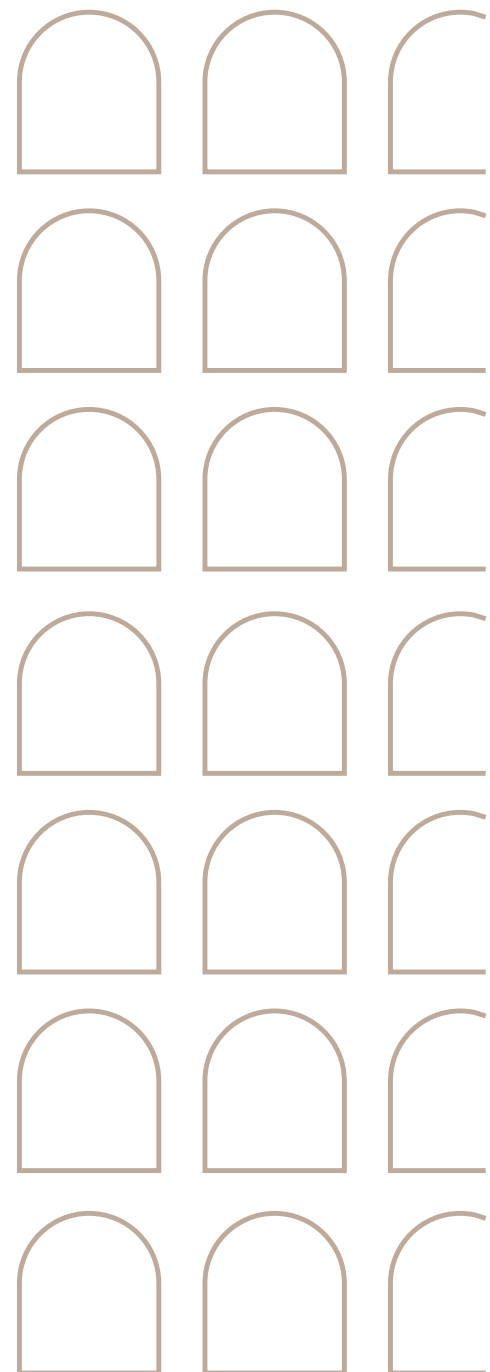Email: stg.publications@eui.eu

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