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MAIN PAPER

When is AI democratic? Artificial intelligence and democratic empowerment

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Abstract

While many debates frequently emphasize the threats artificial intelligence poses to democratic life, scholars are increasingly examining the role AI may play in supporting democracies. However, little attention has been given to a crucial question: how and under what conditions AI can be considered democratic, not only in its design but also in its societal outcomes. I argue that AI is democratic when it is democratically empowering, meaning it contributes to redistributing power and creating symmetrical power relations rather than centralizing them. This argument is rooted in the framework of participatory democracy, which prioritizes the active involvement of the citizenry and the redistribution of power across all social spheres. Drawing on participatory democracy, Foucauldian and Actor-Network Theory perspectives, the paper identifies three essential features of power that are needed for theorizing democratic AI: the pervasiveness of power relations in everyday life, the agency of technological artifacts understood as "actants", and the way power structures relations that can be more or less symmetrical. To assess whether and how AI may be deemed democratic, the paper suggests investigating how AI shapes power dynamics in two dimensions: AI making (development, design, political economy, governance, and imaginaries) and AI action (how AI operates in fields like education, healthcare, information, and politics). This approach helps to take into account the complexity and ambiguity of power dynamics, critically examining whether and how AI contribute to the redistribution of power across different domains. Ultimately, this theoretical framework provides a roadmap for developers and policymakers interested in promoting a more democratic AI.

Keywords Artificial intelligence · Democracy · Democratic AI · Participatory democracy · Democratic empowerment · Power

1 Introduction

The debate on AI and democracy frequently emphasizes the threats it may pose to elections and the broader integrity of democratic systems (Coeckelbergh 2024). In this line, scholars and public opinion focused on the manipulation of elections (Wirtschafter 2024), misinformation and deep fakes (Simon et al. 2023), polarization fueled by recommendation systems (Bail 2023), and the emergence of new information gatekeepers (Jungherr and Schroeder 2023). Less academic attention has been devoted to how artificial intelligence could enhance democracy itself. Literature on this subject is emerging, and AI tools are increasingly employed for sustaining citizens' participation and engagement in an attempt to alleviate the crisis of democracy (Nasi 2025).

Parliaments worldwide have adopted AI systems to enhance their legislative processes. US Congress has implemented the Policy Growth Model (PGM), a predictive model analyzing the interplay between economic growth and the federal budget. Brazil's Chamber of Deputies utilizes Ulysses, a machine learning-powered platform providing insights from large volumes of data and documents. The Estonian Parliament has adopted HANS, a large language model for transcribing parliamentary meetings. In India, the Digital Sansad enables Members of Parliament to listen to speeches in their mother tongue in real time (Harris and Wilson 2024).

Over the last decade, projects aiming to enhance people's participation have emerged within civic tech and e-participatory platforms (Garcia et al. 2023). One of the most prominent and internationally recognized cases is vTaiwan

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(Moats and Tseng 2023). Leveraging the machine-learning-powered software Pol.is, vTaiwan has achieved notable legislative and political outcomes, including the regulation of Uber and the active engagement of thousands of citizens. The drive to democratize AI has also resonated with major tech companies (Seger et al. 2023). In 2024, OpenAI initiated the *Democratic Inputs to AI* project to foster more open and democratic AI development and implement AI for democratic purposes. Schneier and Sanders (2025) argue that AI could profoundly reshape democratic systems. They point to possibilities such as AI proxies designed to increase voter participation, AI-assisted policymaking that enhances evidence-based approaches, and systems enabling novel and more expansive forms of direct participation. They also consider the potential for AI to represent the interests of those who do not vote, including animals, children, and future generations.

These cases show a growing attention to the democratic use of artificial intelligence. However, a key question remains open: how and when can AI be democratic, not only in its design but also in its societal outcomes? The paper argues that AI can be deemed democratic when it is democratically empowering, namely when it contributes to redistributing power rather than centralizing it, creating more symmetrical power relations. This perspective is rooted in a particular understanding of democracy: participatory democracy, which emphasizes the participation of the maximum number of citizens and advocates for a substantive redistribution of power beyond the strictly institutional political sphere. This conceptualization of democracy proves valuable for two main reasons. Firstly, it places a central focus on the notion of power, which allows to look at the *democraticity* (Landemore 2020) of technology itself. Moreover, being more general and encompassing than other conceptualizations, it allows for including different concepts often associated with democracy, such as majority rule, participation, and deliberation. Having a clear conceptualization of what democracy is proves beneficial from various perspectives. Firstly, it clarifies an emerging field that requires a theoretical framework for better comprehension. Second, it helps to design new technologies: an empowerment-oriented design is a way to ensure technology is as democratic as possible, not just in its output but also in the design and deployment.

To support this argument, the paper proceeds as follows. The next section examines how practitioners' work and academic literature have implicitly attributed four distinct meanings to the adjective "democratic" in discussions of AI: majority rule, participation, deliberation, and empowerment. I argue that the latter (being more abstract and, in some respects, encompassing the others) provides the most appropriate conceptual foundation for understanding democratic AI. The following section further develops the notion of empowerment by drawing on the framework of participatory democracy, which places citizens' power and participation at the core of democratic life. Section 4 then outlines three key features of power from a participatory perspective: its presence across all spheres of social life, its distribution among both humans and technological artifacts, and its role in producing either symmetrical or asymmetrical relations. On this basis, democratic empowerment is understood as the capacity to shape power relations in more symmetrical and horizontal ways. To identify power relations within AI assemblages and render this approach more concrete, Sect. 5 suggests looking at how technology can be democratically empowering by investigating both *AI making* and *AI action*. The final section concludes.

2 Which democracy? Majority rule, participation, deliberation, and empowerment

Some of the main works addressing the AI and democracy nexus suggest areas in which these two spheres interact. According to Jungherr (2023), AI impacts four main subfields of democracy: individual self-rule, equality between groups, the stability of institutions (specifically elections), and the international competition between authoritarian states and democracies. Summerfield and colleagues (2025) looked at epistemic, material, and foundational effects of AI on democracy, while Risse (2022) proposes focusing on three key domains in which AI systems may shape democratic life: the public sphere, political power, and economic power.

More recently, scholars have explored not just how AI may interact with democracy, but how AI itself may be democratic. Practitioners are developing specific applications for supporting different aspects of democratic life, like AI chat assistants that make real-time, evidence-based suggestions for messages in divisive online political conversations (Argyle et al. 2023) or AI-powered platforms to facilitate crowd discussions (Ito et al. 2022). Seger and colleagues (2023) argued that we can see AI democratization in at least four areas: use, development, benefits and governance. However, the precise meaning of democratic AI remains somewhat unclear, and ambiguity is evident in the literature. To better address this point, this section delves into the various interpretations of "democratic" when discussing democratic AI. Insights from academic literature and real-world applications suggest at least four distinct meanings: majority rule, participation, deliberation, and empowerment.

Some equate democratic AI with broad consensus and majority rule. That is the case for the literature on AI alignment, a field dedicated to ensuring that AI aligns with human intentions and values (Ji et al. 2024) (Ovadya et al. 2025)

Scholars in this domain address the detachment and lack of coherence between AI and societal values, highlighting a discrepancy between the people's will and how technology is developed and used. To tackle this issue, efforts have been made to create a democratic AI that aligns with people's voices. Computer scientists have worked on developing a democratic AI capable of producing policy outputs that maximize the likelihood of winning the majority vote (Koster et al. 2022). Similarly, one of the projects that received the Open AI democratic grant aimed to develop policies that reflect the informed public will, utilizing automated consensus discovery (Konya et al. 2023). Ovadya's "collective response systems" also fall into this category. These systems provide a platform for diverse individuals to express their views. Opinions are collected, automatically summarized, and analyzed through machine learning tools to identify consensus among participants (Ovadya 2023).

Other scholars see participation as the defining element of democratic AI. That is the argument of the so-called democratizing AI literature (Rahwan 2018; Wong 2020; Cammaerts and Mansell 2020)[1] The primary point raised by these scholars is that for AI to have a positive social impact, it should be made accessible to a broader audience. That means involving more people in its deployment, development, and design beyond the conventional roles of tech developers, computer scientists, and big tech companies, for instance through people's councils or participatory processes (McQuillan 2018). The idea of democratizing AI is seen as a way to tackle algorithmic bias and injustice (Zimmermann et al. 2020) and to establish more inclusive and deliberative forms of governance (Buhmann and Fieseler 2023). Following Himmelreich (2023), the call to democratize AI involves three key aspects: renewed and open institutions, more individual participation, and inclusiveness by design.

A third branch of research suggests that an AI system is democratic when it facilitates informed and rational discussion, which is a critical feature of a deliberative understanding of democracy (Habermas 1994; Dryzek 2002). Argyle and colleagues (2023), for instance, developed an AI chat assistant that makes real-time, evidence-based suggestions for messages in divisive online political conversations, while Ito and colleagues developed an AI-powered platform to facilitate crowd discussions (Ito et al. 2022). Researchers at Google have developed the "Habermas machine" designed to facilitate discussions and generate information to support deliberative processes, such as citizens' assemblies (Tessler et al. 2024). AI can also sustain deliberative processes by producing alternatives and implicitly finding preferences, which help people's decision-making process (Fish et al. 2023).

Scholars from political theory have focused on the potential use of AI in deliberative processes as well. Landemore (2024) identifies two primary applications of AI in the field of deliberative democracy: first, mass online deliberation, where many individuals contribute to different aspects of a shared question with the intermediation of algorithms. Second, randomly selected deliberative assemblies, where AI exposes members to the full range of views on a specific question. Mikhaylovskaya (2024) suggests that scale, transparency and facilitation (three key issues when dealing with deliberative processes) can all be enhanced by using AI, especially by mitigating power asymmetries emerging between human participants.

A more informed discussion often serves as a way to empower people, offering additional information to enhance awareness and, eventually, the ability to take action. This point brings us to the last interpretation of democracy for democratic AI: empowerment. In a study on Afghan women, scholars demonstrated how conversational agents can qualitatively and quantitatively empower marginalized groups (Hadfi et al. 2023). Another example is Jugalbandi, an LLM-powered chatbot allowing Indian residents in rural regions to access government services in their native language[2]. From this perspective, AI is considered democratic not only when it informs people but also when it actively empowers them. Civic tech platforms share a particular focus on empowerment and similar concepts. One of the central goals of Ethelo[3] is to "Empower" by utilizing "instant scenario analysis inspires participant ownership and lets you make fair decisions that get support.". Citizens Foundation[4], an Iceland-based non-profit organization that develops AI and software for democratic participation, opens its website with the slogan: "Platforms and AI empowering citizens and governments."

This review shows how majority rule, participation, deliberation, and empowerment are considered for defining democracy in the context of AI. I argue that empowerment provides the most appropriate lens for theorizing democratic AI. As a more abstract concept, it operates at the appropriate level of abstraction required to develop a concept such as "democratic AI," which itself demands a broad theoretical scope (Floridi 2008). The other categories

[1] Democratizing AI differs from AI democratization, which refers to the increasing access and availability of AI technologies. As it has been clearly putted by Microsoft's CEO Satya Nadella, the goal of AI democratization is "putting the tools in the hands of every developer, every organization, every public sector organization around the world" The quote is retrieved from: https://news.microsoft.com/europe/2017/01/17/democratizing-ai-satya-nadella-shares-vision-at-dld/

[2] See: https://www.jugalbandi.ai/mission

[3] See: https://ethelo.com

[4] See: https://www.citizens.is/

are more specific and therefore less suited to capture the full range of phenomena under consideration. Moreover, precisely because of its broader scope, empowerment can encompass the other dimensions—majority rule, participation, and deliberation—whereas the reverse is not possible. Majority rule, often seen as the core of democracy, is genuinely democratic only when it contributes to symmetrical power relations and avoids outcomes such as the tyranny of the majority or the concentration of political power in oligarchic structures (Horwitz 1966). Similarly, participation can be understood as a mechanism of empowerment insofar as it broadens inclusion in decision-making and redistributes power more evenly. "Participation" alone may be insufficient and fall into "participation washing" if underlying power relations remain unchanged (Sloane et al. 2022). Deliberation represents another pathway to empowerment by enabling inclusive and reasoned public discussion among equals, thereby shaping decision-making processes in ways that distribute political and epistemic authority more symmetrically. Crucial issues in deliberative initiatives such as "who speaks, how knowledge is constituted, what can be said, and who decides" (Fischer 2006, p. 1) are all power-related issues. Taken together, these democratic practices can be interpreted as specific manifestations of democratic empowerment.

3 Participatory democracy and democratic empowerment

To clarify the meaning of democracy and empowerment in the context of democratic AI, it is first necessary to examine democracy itself, particularly the branch of democratic theory that places empowerment at its center: participatory democracy. It is possible to distinguish between two main broad categories (Manin 1997). The first is the formal, elitist understanding of democracy, primarily used in political science, based on elections and the rule of law, which focuses on institutions and procedural aspects of democracy. The second is a substantive view of democracy based on the etymologically core principles of democracy, namely participation and people's empowerment. Barber, one of the key theorists of participatory democracy, called the first *thin democracy* and the second *strong democracy* (Barber 1984).

Bobbio claimed that "the only way to understand each other when talking about democracy is to consider it characterized by a set of rules that establish who is authorized to make collective decisions and through which procedures" (Bobbio 1995 p. 4). So, the focus of thin democracy is on procedural aspects, on the rules that allow an elite to make collective decisions. That is the view shared by some of the founding fathers of political science and the so-called elitist thinkers. For Schumpeter, democracy is "that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of competitive struggle for the people's vote" (Schumpeter 1942 p. 269). This view implies that power in a thin democracy is mainly up to elected representatives. Democratic politics is practically brought forward by competing elites who follow specific rules, not by citizens (Sartori 1962), who *react* (not directly *act*) to policymakers' decisions, and this is the main way they can exert some form of power.

A thin understanding of democracy centers on the adherence to the rules of engagement, including elements like election fairness, party competition, the separation of powers, and the rule of law. While undeniably crucial for analyzing democratic institutions, a thin conception of democracy proves less suited when attempting to delineate what qualifies as democratic beyond the confines of political institutions. Thin democracy lacks a definitional framework based on certain qualities that could be extrapolated and extended to other domains of human life, such as the use of technology. Therefore, its applicability is confined strictly to the institutional political sphere. If we were to exclusively interpret democratic AI through the lens of thin democracy, for instance, its scope would be limited to utilizing AI systems within political institutions and elections, failing to take into account all the different fields and ways in which AI may be deemed democratic.

For addressing this gap, participatory democracy is particularly useful. As dissatisfaction with liberal and representative democracies grew in the 1960 s, a school of thought gradually emerged, drawing on a tradition rooted in ancient Greece, Italian city-states, and the Enlightenment thinking of Rousseau (Van Reybrouck 2016). This perspective made participation and involvement of the citizenry the central core of its vision of democracy, which is why we referred to it as participatory democracy (Pateman 1970). The focus was no longer on policymakers' power but on ordinary citizens' power, who should have many *fora* to voice their opinions and act. Examples include protests, manifestations, citizens' assemblies, supplementary institutions formed by lottery, participatory budgets, consultations, and other democratic innovations (Smith 2009). A strong democracy prescribes a "self-governing community of citizens" who "are made capable of common purpose and mutual action" (Barber 1984, p. 117).

The core of participatory democracy is to empower, namely, to distribute power more equally and symmetrically. This entails investigating how power is not only distributed within the strict confines of political institutions but also in other spheres of society, such as the workplace, schools, associations, and beyond. As Pateman (1970 p. 42) claimed: "[…] For maximum participation by all the people, that level socialization or social training for democracy must take place in others spheres in order that the necessary individual

attitudes and psychological qualities can be developed." In an ideal participatory democracy, society aims for a more equitable power distribution, allowing more individuals to engage in political action. Power then strictly links with participation. Participating is a way to exert power by making someone's voice heard and trying to influence the course of events[5]. In contrast to thin democracy, this view puts forth a distinct concept of power and its rightful location. In this perspective, the broader the power distribution, the more extensive the network of relations it creates, and the more beneficial it is for democracy.

This perspective is inherently more normative than electoral democracy. However, this paper is not interested in describing democracy as it is today but in finding a suitable definition of democracy for defining democratic AI. For this purpose, normativity is helpful because it leads to more encompassing categories, promoting values such as participation, equality, and empowerment. These values, being more general, can be applied not only in the strictly political sphere but also in various aspects of life. For example, suppose we adhere to a thin view of democracy. In that case, a concept such as that of democratic family (Ahlberg et al. 2008) would entail a family whose member strictly adhere to principles of participation, elections, and the rule of law. On the contrary, understanding democracy through the lens of participatory democracy, with empowerment and participation as its core, a democratic family embodies a specific family configuration wherein everyone is empowered, thus fostering greater autonomy for its members (which is the meaning of democratic family). That demonstrates that when we use the adjective "democratic" we refer to a participation-oriented understanding of democracy. This theoretical lens provides a valuable framework for grasping when and how we can characterize an AI system as democratic, as it allows us to extend our analysis beyond the confines of political institutions. Now it is key to delve into the specific meanings of empowerment and power relations, and to explore how these concepts link with applications of artificial intelligence.

4 Three features of power for democratic AI

Speaking of democratic empowerment as the defining feature of democratic AI requires a clearer understanding of what is meant by power. In particular, conceptualizing democratic AI requires moving beyond a view of power confined solely to the political sphere; otherwise, technology would remain outside its scope. It also requires recognizing AI systems themselves as actors capable of exercising forms of power; otherwise, it would not be AI that is democratic, but rather external factors that render it so. Finally, it is necessary to establish criteria through which the effects of these systems can be assessed as more or less democratic. For this purpose, based on the characteristics of participatory democracy previously outlined, I identify three features that are particularly useful for theorizing democratic AI: the pervasiveness of power across all spheres of social life; the capacity of both human and non-human actants to exert power; and the role of power in structuring relations that may be more or less symmetrical.

First, power relations are not limited to the realm of institutional politics. The goal of participatory democracy is to make all of society more democratic, since all societal fields are characterized by power relations that can be more or less democratic. This perspective builds on Foucault's understanding of power as pervasive within the social fabric and embedded in everyday practices[6]. Bio-power well exemplifies this view. Foucault defines bio-power as "what brought life and its mechanisms into the realm of explicit calculations and made knowledge-power an agent of transformation of human life." (Foucault 1978 p. 143) Biopower encompasses various aspects, from traditional policies (e.g., birth control) to more subtle, relational forms of power, such as social pressure for fitness, the subjectification of citizens under specific categories in national statistics, or pervasive surveillance practices for protecting the population from pandemics and diseases. In this perspective, power not only influences decisions, agendas, and preferences but also shapes our sense of self and reality. How we see ourselves—whether as citizens, women, workers, or otherwise—is deeply affected by power dynamics, which, in turn, define the range of actions we believe are possible. Without some

[5] Power and participation as the key element for a participatory theory of democracy are also present in the more recent theory of open democracy, which is "the ideal of a regime in which actual exercise of power is accessible to ordinary citizens via novel form of democratic representation" (Landemore 2020, p. XVII).

[6] In *Power: A Radical View*, Lukes (2005) describes power as a "contested concept" with three dimensions. The first, the classical view, sees power as the ability to make decisions affecting others, echoing pluralist theorists like Robert Dahl, who wrote: "A has power over B to the extent that A can get B to do something B would not otherwise do" (Dahl 1957 pp. 202–203). The second dimension emphasizes agenda-setting power: the ability to determine which issues are up for discussion and which are marginalized, shaping debates and policy indirectly (Bachrach and Baratz 1962). The third, Lukes' "radical view of power," concerns controlling values, ideas, and perceptions, influencing what people want and desire. Lukes describes Foucault's perspective as an "ultra-radical view of power" because it goes further by attributing to power the capacity to shape subjects themselves. Foucauldian analysis focuses on how power shapes and constitutes subjects. This, however, does not deny that power also operates through decision-making or through influencing agendas and preferences. Rather, the emphasis shifts to this dimension of power that has traditionally remained more "hidden".

form of power to influence and shape reality, there would be no fields of knowledge, sense of reality, or self-perception. A subject will always be subject to certain power relations that allow and, at the same, restrict its field of action. Therefore, in this perspective, there is no dimension of pure freedom as opposed to power, as power is an immanent dimension of all relations. Freedom and democracy are not the absence of power. Instead, empowerment becomes the product of symmetrical power relations, which do not seek to oppress but enable action.

In sum, from a Foucauldian perspective, power dynamics are everywhere and shape fundamental aspects of reality, knowledge, and identity. This is evident in the case of AI when biased algorithms may reinforce structural class inequalities, thereby influencing individuals' self-understandings. Specific AI-related imaginaries and narratives create specific power-knowledge nexus that influence in a more or less democratic direction public opinion and policymaking (Larson 2022; Oldenburg and Papyshev 2025). AI-driven power dynamics also extend into less visible domains of social life, including the governance of bodies and labor—for instance, in the extraction of raw materials required for digital infrastructures and in the precarious working conditions faced by data labelers (Crawford 2021).

Second, a consequence of this distributed understanding of power concerns not only where power can be located, but also who—or what—can exercise it. Power, in this view, is not limited to human actors but can also be exercised through and by artifacts. This perspective resonates with insights from Actor–Network Theory, which suggests that non-animated objects are "actants" together with humans and possess a form of agency, since they participate in shaping social relations (Latour 2005), even though they do not possess a will of their own. Artificial intelligence systems thus become part of a complex relational assemblage in which the associations that emerge are also relations of power (Munro 2009). This conceptualization is essential because, if artifacts were unable to shape power relations, speaking of democratic AI would be meaningless, as only relations among humans could then be considered more or less democratic.

The uniqueness of AI compared to other technologies lies exactly in the significant leap it has made in how it wields power. Its key features—machine learning, the automation of cognitive and creative tasks, and predictive capabilities—give AI a level of agency that no other technology has had before (Floridi 2025). In the field of political activism, scholars introduced the concept of "symbiotic agency" referring to the "technologically mediated entanglement of human and nonhuman agencies" (Neff and Nagy 2016, p. 4926), highlighting how human agency is co-constituted by the artificial agency of recommendation systems in social media platforms. AI thus operates both as a tool programmed by human agents and as an autonomous actor capable of exerting its agency, thereby innovatively transforming power dynamics. This technology frequently mediates human interactions and consequently influences them. Consider automation bias, the presumed objectivity and efficiency of automated systems, which leads to humans' over-reliance on their outputs (Lyell and Coiera 2017). This constitutes a form of power since it significantly affects and shapes people's decisions and perceptions.

Third, power relations can be more or less symmetrical. Power is not necessarily a synonym of domination or oppression. If power is understood as a "network of boundaries that delimit, for all, what is socially possible" (Hayward 2000 p. 3), the scope of what is socially possible can vary. It may be broader and more open, allowing a wider range of actors to exercise power, or narrower and more constrained. For this reason, analyses of power relations should "distinguish […] relations that promote political freedom from those that approximate states of domination" (Hayward 2000 p. 39). In this sense, democratic empowerment can be understood as the expansion (qualitatively and quantitatively) of people's opportunities to exercise power.

In more symmetrical power relations, the space of the socially possible is broader, allowing a greater number of actants to exercise and contest power. Social possibility is defined in ways "that are knowable to those whose action they circumscribe, and in ways that enable those they affect to help modify or transform them" (Hayward 2000 p. 39). In AI, examples could include systems developed through and for participatory processes (Birhane et al. 2022), systems that contribute to diminish poverty and unequal access to technology (Kshetri 2022), systems that help to empower marginalized communities (Hadfi et al. 2023), or explainable and transparent open-source systems or model sharing practices (Baru et al. 2022) (Han et al. 2023).

By contrast, in asymmetrical power relations, opportunities to exercise power are fewer, more constrained, and more unevenly distributed. An asymmetrical power relation can therefore be understood as a dynamic in which, among a set of entities, one or a few wield significantly more power than others[7]. Following the previous discussion of

[7] A strictly Foucauldian reflection on power would focus less on the actants who exercise power and more on the anonymous field of forces that emerges from their interactions. The aim here, however, is not to adopt a fully Foucauldian framework, but rather to draw on insights from key political thinkers—such as Michel Foucault and Bruno Latour—to develop a working understanding of power suitable for analyzing democratic AI. Furthermore, paradoxically, departing from strict fidelity to Foucault is itself consistent with a Foucauldian spirit. As Foucault (1994 pp. 523–534) himself wrote: "I would like my books to be a kind of tool-box which others can rummage through to find a tool which they can use however they wish in their own area…. I would like the little volume that I want to write on disciplinary systems to be useful to an educator, a warden, a magistrate, a

power dynamics, these entities are not necessarily human. They may include artifacts as well as more diffuse entities which do not have a specific actor exerting power such as norms, laws, social imaginaries, and shared beliefs. In the most asymmetrical case, we have domination, that is, when "power relations are fixed and forever asymmetrical so that the margin of freedom is highly limited" (Foucault 1987 p. 12). In the realm of AI, an instance of asymmetrical power relation might involve an AI system exacerbating authoritarian rule, such as through its deployment for surveillance purposes (Leibold 2020). The very manner in which AI is developed, managed, and governed is another case in point. The concentration of AI technologies in the hands of a small number of powerful companies produces deeply asymmetrical power relations that conflict with principles of democratic legitimacy. Scholars conceptualized this situation as "Big Tech authoritarianism" Akbari (2025) or "technofascism with AI", which "refers to the synthesis of digital technologies (in particular AI) and fascist political tendencies that resemble classical fascism without necessarily replicating its outward symbols" (Coeckelbergh 2026 p. 5).

5 How AI can be democratic: *AI making* and *AI action*

How can the understanding of power and participatory democracy outlined in the previous sections be operationalized to identify when democratic AI emerges? Addressing this question requires adopting a dual perspective, examining both how AI systems are produced and how they operate within society—what can be described as *AI making* and *AI action.*

AI making refers to the processes through which AI technologies are designed, developed, governed, and imagined. This perspective draws on early insights from science and technology studies regarding the social construction of technology (Pinch and Bijker 1984), emphasizing how technological systems are shaped by social, political, cultural, and economic choices. AI action concerns how AI systems are deployed and operate in practice: how they are used, how they interact with social environments, and how they exert effects—sometimes autonomously—across different social domains. This distinction also builds on reflections on how artifacts can have politics. As Winner (1980) argued, technology is political in (at least) two senses: first, by its very nature and design, a specific technology could be more coherent with certain political relations (AI making)[8]; second, it can be used for specific political purposes (AI action).

In both cases, assessing the democratic character of AI requires examining the extent to which these systems are democratically empowering, namely if they shape power relations in symmetrical ways. In the case of AI making, an AI system can be considered democratic when the power relations that shape its development are themselves symmetrical. In the case of AI action, an AI system is democratic insofar as it contributes to making power relations across different societal domains more symmetrical. This approach builds on the three premises about power outlined in the previous section. First, following Foucault, power is present across all spheres of social life. Second, drawing on Actor–Network Theory, AI systems themselves can exercise a form of agency, thereby contributing to the configuration of particular power relations. Third, these relations can be more or less symmetrical, and therefore more or less democratic. AI can be considered democratic insofar as, both in its making and in its action, it contributes to the production of symmetrical power relations.

Generally, it is challenging to picture a system where power relations are always balanced, from extracting raw materials to the output of algorithmic decisions. Human life is made of power asymmetries, and a fully symmetrical society would not be feasible and, maybe, nor even desirable[9]. Democratic AI is an ideal type, and different degrees

Footnote 7 (continued)

conscientious objector. I don't write for an audience, I write for users, not readers."

[8] According to Simons (2023), there are two main ways in which design decisions in machine learning are political. First, AI systems often prioritize the interests of certain social groups over others. It is essential to identify which groups are given priority in the design of a specific technology. If the design overlooks marginalized groups, the technology is likely to perpetuate existing stereotypes and power imbalances. Second, design choices in machine learning are political because they embed specific values while excluding others. What values underpin the design of AI systems? If values such as fairness, equity, and autonomy are not considered, and the focus is solely on efficiency, precision, and output maximization, the likelihood of the AI being democratic diminishes.

[9] It is important not to automatically equate democratic AI with some broader understanding of ethical or socially good AI. Being democratic is about power and its exercise, not goodness or fairness (Kalluri 2020). Although a democratic AI may often align with ethical principles (Floridi et al. 2020; Floridi 2023) this correlation is not automatic. For instance, a social media content moderation algorithm may stifle certain voices and perspectives, favoring mainstream positions and reinforcing a specific power dynamic on that platform (Oh and Downey 2024). While such moderation may be ethically justifiable, such as in cases involving hate speech, it still represents a centralization of power, even for a legitimate purpose. Furthermore, powerful AI models in open source may be used for malicious purposes, with controls very difficult to enforce (Seger et al. 2023). While having an open-source code is doubtlessly something democratic, this redistribution of power presents many challenges. In other words, democracy and power redistribution are not always synonymous with what is inherently good or fair.

of democraticity exist. Being democratic is not absolute, but it depends on the specific component of the AI assemblage under consideration and the relations established with the external world. For example, using AI in participatory processes can centralize power with those managing the project. A chatbot designed for activists could exhibit many biases. Likewise, applying AI technology in fields such as medicine and education might result in increased human passivity and deskilling. Given this complexity, looking at AI making (analyzing the politics inherent to the AI system itself) and AI action (examining how an AI system enhances humans' capacity for action in different societal fields) allows to take into account the complexity of the AI assemblage, investigating the political nature of AI and its potential to foster empowerment.

5.1 AI making

AI making involves discussing AI's democraticity in areas such as AI development, design, political economy, governance, and imaginaries.

Many hidden asymmetrical power dynamics pervade the entire lifecycle of AI technology: data collection, data preparation, model development, model evaluation, model postprocessing, and model deployment (Suresh and Guttag 2021) can all be influenced by power dynamics. An example of democratizing AI development is broadening the circle of those involved in its design and creation. This aims to create more symmetrical power relations by ensuring that technologies are not developed solely by a narrow population segment, without public input, and concentrated in a few well-funded laboratories. Instead, the goal is to foster a more widespread and inclusive development process, making AI more democratic and accessible. A noteworthy example is the Anthropic and Collective Intelligence Project's *Constitutional AI* (CAI). This collective process involved over 1000 people sharing their views on how the company's chatbot should be developed to align their system with human values and preferences (Bai et al. 2022).

Design choices can also create a more accessible AI: as Seger et al. suggest (2023), this can be done by reducing the costs associated with acquiring and operating AI tools, offering accessible services to assist users in integrating AI models into their workflows, and creating user-friendly interfaces that enable seamless human-AI interaction without the need for extensive training or technical expertise. Specific techniques like federated learning can also help developing a more democratic AI. Federated learning can contribute to making AI more democratic by reducing the concentration of data and decision-making power in the hands of a few large actors. By training models directly on users' devices or local servers, this approach preserves privacy while incorporating data from diverse communities, thereby promoting a more equitable representation of users' needs and experiences (McMahan et al. 2017).

The extent to which an AI system is accountable plays a crucial role in determining whether it can be considered democratic. Accountability is a central component of democratic governance (Schmitter and Karl 1991; Higgins and Martin 2025) and is closely related to the conception of power developed in this paper. Novelli and colleagues define accountability as a "relation of answerability," that is, "an obligation to inform about, and justify one's conduct to an authority" (Novelli et al. 2024 p. 1872). They identify three key elements of such a relation. First, authority recognition, whereby the subject (A) who delegates power recognizes the authority of the system (F) to act. Second, interrogation, meaning that A must be able to scrutinize and question the actions of F. Third, limitation of power, which establishes clear boundaries on the scope of action that F can exercise. Users should be able to interrogate the system, understand and challenge its decisions, and ensure that its capacity for action remains appropriately constrained. Otherwise, the relationship between the artifact and the user risks becoming one of excessive asymmetry, in which the system exercises power without adequate mechanisms of oversight or contestation.

The capacity of users to interrogate AI systems is strictly connected with another topic: AI opacity, or the so-called black box problem. Jenna Burrell identifies three forms of opacity: "opacity as intentional corporate or state secrecy, opacity as technical illiteracy, and an opacity that arises from the characteristics of machine learning algorithms and the scale required to apply them usefully." (Burrell 2016 p. 1). Opacity exacerbates asymmetries of information—and therefore of agency and power—between algorithm designers, system operators, and users. Such asymmetries raise significant concerns from the perspective of democratic accountability and public trust. As Daniel Carabantes (2020) argued, black-box AI models may deepen these asymmetries by enabling corporations and governments to conceal the logic of their algorithms under the justification of maintaining security and market competitiveness. Furthermore, technical solutions such as explainable AI (XAI) cannot fully resolve these issues. A fundamental trade-off often exists between predictive accuracy and explainability since the most powerful models are also the least intelligible. Many current XAI techniques do not provide full explanations because they fail to reveal the internal representations, or the sequence of inferences used by the model and just "indicating which inputs have been the most relevant to produce an output is not an explanation" (Carabantes 2020 p. 315).

Establishing more balanced power relations requires changes in the economic sphere as well. Today's oligopolistic, profit-driven political economy of AI undermines democratic empowerment, creating significant power imbalances

that favor a handful of large corporations. Varoufakis (2023) characterizes this emerging order as "technofeudalism." In his account, technofeudalism describes an economic system in which traditional capital has become subordinate to the cloud capital controlled by major technology platforms. Within this configuration, billions of individuals effectively function as "serfs of the cloud," reproducing the capital of platform owners through their data, content, and attention, often without compensation. To move beyond this model, Varoufakis proposes a set of structural reforms, including the democratization of firms based on the principle of "one employee, one share, one vote," the socialization of land and cloud capital, and the introduction of a universal basic dividend distributed through digital wallets held at central banks. Along similar lines, Ferraris (2025) advances the idea of "digital communism," arguing that the value generated by socially produced data should yield socially shared benefits. In this view, the digital economy should shift from a model based on the private extraction of value from data toward one grounded in collective redistribution.

Power relations within the sphere of institutional politics may also shape the democratic character of AI, particularly with regard to AI governance. Floridi defines digital governance as "the practice of establishing and implementing policies, procedures, and standards for the proper development, use and management of the infosphere" (Floridi 2018 p. 3). To help ensure that AI can become a force for good for democracy, a number of digital "guardrails" have been proposed, including content watermarking, public-interest AI platforms, and independent algorithmic audits (Altman 2026). Another crucial dimension of democratic governance concerns the range, type, and modes of stakeholder involvement. The broader and more meaningful this participation, the more plausible it is to speak of a democratic approach to AI, as such inclusion helps foster more balanced power relations rather than concentrating decision-making and political authority in the hands of a few actors (Himmelreich 2023).

The democraticity of AI also depends on the narratives and collective imaginaries that shape its development (Zhong et al. 2025). For example, if the prevailing common sense regarding AI centers on a strongly economistic and technocratic approach—uncritical and indifferent to potential drawbacks—the opportunities to develop a more open and democratic technology diminish, as AI will remain the domain of a narrow minority. Conversely, suppose the dominant narrative is one of a technology with significant social impact that must be collectively governed to mitigate risks and dangers. In that case, power relations become more symmetrical, allowing a broader range of actors to feel legitimized in contributing to and engaging with the issue (Oldenburg and Papyshev 2025).

5.2 AI action

Regarding *AI action*, the capacity of AI to shape more symmetrical power relations translates into its ability to make different societal sectors more democratic, increasing the quality and quantity of the possibilities for action. Given space constraints, I will limit this analysis to four fields: education, healthcare, information, and politics, with a more extended focus on the latter.

AI's capacity to tailor learning experiences offers an example of democratic AI. As Harry (2023) suggests, AI may serve as a democratizing force in education by making learning more accessible and inclusive for learners of all backgrounds. Unlike the traditional lecturing approach, which teaches students the same way and evaluates them uniformly, AI can offer a more personalized educational experience. AI may democratize the classroom experience through personalized learning, which tailors' instruction to each student's specific strengths and weaknesses. Recent empirical research suggests that Pedagogical Conversational Agents (PCAs) can play a democratizing role in education by overcoming systemic constraints that currently prevent many children from accessing critical services like social-emotional learning (SEL) (Raave et al. 2026). Potential democratizing benefits should not obscure the challenges of AI in education, though. Selwyn (2024 p. 3) for instance suggest four main critical issues: "the limited ways in which educational processes and practices can be statistically modelled and calculated; the ways in which AI technologies risk perpetuating social harms for minoritized students; the losses incurred through reorganising education to be more 'machine readable'; and the ecological and environmental costs of data-intensive and device-intensive forms of AI."

AI can democratize healthcare by making services more accessible, affordable, and efficient for people regardless of location or financial status. AI-powered tools can assist with diagnosing illnesses through telemedicine, allowing people in remote or underserved areas to access quality care without needing to travel. AI can provide easy-to-understand medical information and guidance, empowering individuals to make informed decisions about their health vis-à-vis doctors or pharmaceutical companies. In addition, AI can analyze patient data to recommend tailored treatment plans, improving outcomes for individuals by addressing their specific needs and conditions. Furthermore, by automating administrative tasks, streamlining workflows, and reducing human error, AI can cut operational costs, making healthcare more affordable for a broader population (Rubeis et al. 2022). As Chen, Liu and Zhu sumps up, generative AI "possesses unique features that make it well-suited for democratization, potentially transforming healthcare into intelligent learning health systems in the future" (Chen et al. 2024 p. 13). Also in this case, however, AI should not be seen as a panacea

for every problem. Smith (2021) warns about the erosion of public accountability caused by algorithmic opacity, which prevents patients and regulators from meaningfully scrutinizing the logic behind life-altering clinical decisions. Further challenges include "the lack of transparency, trust, and regulatory laws […] bias and liability concerns […], and patient information is at risk of being exposed" (Tung et al. 2025 p. 14).

Specific AI applications can be democratic for their role in making the public sphere more informed, transparent, and democratic, increasing citizens' epistemic agency. In response to concerns that engagement-driven recommendation systems often amplify division, some have proposed alternative algorithmic designs with explicitly democratic aims. Ovadya and Thorburn (2023) describe these as "bridging systems", which prioritize fostering mutual understanding, trust, and constructive disagreement across ideological divides. Rather than optimizing for engagement, such systems seek to amplify those contents that connects disparate perspectives and supports deliberation or cooperation. Further examples include community-driven moderation and proof of humanity systems, namely AI tools trained to "distinguish between human and automated entities in digital spaces" (Goldberg et al. 2024 p. 27).

Finally, a crucial role can be played in the democratization of politics itself. In the previous sections, I outlined some platforms that use AI for citizen engagement. Other AI applications for civic participation aim to increase public awareness of political decisions by reducing the informational asymmetry between policymakers and ordinary citizens. These tools can help bridge this gap by making policy proposals and political debates more accessible through translation, as well as by providing summaries and explanations of complex materials. Examples include Panoramic AI, "a citizen-friendly platform designed to enhance understanding of intricate topics debated in the political arena," which has been used to inform the public in participatory processes such as France's Citizens' Convention on End-of-Life and the German federal elections of 2025[10]. Another example is OpenCouncil, a Greek civic-tech initiative that uses AI to automatically transcribe, summarize, and disseminate city council proceedings, thereby making local governance more transparent and accessible to citizens[11].

In terms of participatory practices, a democratic AI could expand access to political engagement. Since political involvement is often voluntary and many people lack the time to dedicate to it, participation in movements or political parties risks becoming an elite activity. AI has the potential to alleviate these time constraints by streamlining tasks such as drafting documents or creating social media content. Some AI tools are specifically designed for this. For instance, Change Agent AI[12], a large language model developed to assist organizers, campaigners, and advocates in achieving their political and social objectives, can generate innovative ideas for protests, demonstrations, and actions to raise awareness in novel ways. Furthermore, scholars looked at the role of AI in supporting bottom-up social movements, for example, by countering repression, addressing organizational and leadership gaps, combating misinformation and media control, overcoming technological and resource constraints, and understanding or countering adversaries (Chenoweth 2025).

From the perspective of AI action, we can assess when AI is democratic by evaluating the impact of an AI system in terms of whether it increases or diminishes people's capacity to act, looking at how a particular technology enhances the collective and individual ability of a given group to take action and exercise power. This perspective can also be integrated with existing and well-established theoretical frameworks, such as the capability approach. Famously developed by Sen (1985) and Nussbaum (2000), its core claim is that "assessments of the well-being or quality of life of a person […] should not primarily focus on resources, or on people's mental states, but on the effective opportunities that people have to lead the lives they have reason to value." (Robeyns 2006 p.1). The extent to which AI contributes to expanding individuals' *functionings*—the valuable *beings* and *doings* people can achieve—and their *capabilities*, understood as the real opportunities or freedoms to pursue and realize these functionings, the more it can be considered democratic.

Focusing on human action and capabilities shows how generative AI systems could be a double-edged sword for democratic empowerment. The unprecedented diffusion and accessibility of generative AI systems open new spaces of power for ordinary citizens. The risk, though, is that it further exacerbates inequalities instead of contributing to reshaping power relations more symmetrically. For instance, it could be beneficially utilized by those with the education and skills to maximize its advantages. On the other hand, it may disincentivize action and critical thought for most of the population, exacerbating automation bias. AI potential to stimulate capacity to act has been recently studied by Guglielmo and colleagues (2026). They suggest that human and artificial agencies are negotiated through a recursive co-encoding/decoding (co-en/de) model. Depending on whether these interactions reinforce dominant hegemonic views or foster oppositional resistance, they result in different hybrid subjectivities along a fluid spectrum. *Androidization* occurs

[10] See: https://about.make.org/articles-en/introducing-panoramic-ai-bridging-the-gap-between-citizens-and-institutions

[11] See: https://opencouncil.gr/

[12] See: https://thechange.ai/#sp-anls7z

when machinic hegemony replaces essential human critical functions and domesticates agency, while *Cyborgization* represents an augmented subjectivity where humans use GenAI to resist domination and expand democratic agency.

6 Concluding remarks

In an article, Himmelreich (2023) asked how AI should be democratized. This paper answers that question by suggesting that an AI system may be deemed democratic when democratically empowering. To sustain this view, I introduced the theoretical framework of participatory democracy. Compared to the electoral view of democracy, participatory democracy does not focus on elections but on people's participation and empowerment. The utility of this view is that it can be applied also outside the strict domain of political institutions, allowing to talk about "democratic" as an adjective for different spheres.

Based on the participatory democracy framework, I deepened the notion of democratic empowerment. I defined democratic empowerment as shaping power relations in a symmetrical and horizontal manner. This point of view has a twofold advantage. First, it look at all the complex power relations formed in an AI assemblage, looking at the power exerted by and through AI in different moments (development, design, economic influence, governance, imaginaries) and in different societal fields such as education, healthcare, information, and politics. Second, talking about democratic empowerment also allows to embrace more specific understandings of what "democratic" means when discussing democratic AI, such as majority rule, participation, and deliberation.

A potential critique of the argument I advanced is that the notion of democratic empowerment is too broad and abstract, encompassing any AI system. However, that is not the case. If an AI's primary function is to enhance the efficiency of civil servants without contributing to any transformation of power dynamics, categorizing them as democratic is not tenable. Similarly, many AI systems used for participatory processes could be limited to pseudo or token participation (Arnstein 1969; McCord and Becker 2023) without the capacity to change power dynamics.

The nature of this work is theoretical and explorative. The goal was not to argue whether today's AI is democratic or authoritarian, but to highlight the conditions under which this technology can be considered democratic or not. Theorizing democratic AI is a first step for developing democratic technologies. To develop democratic systems, it is imperative to consider the entire complexity of power relations related to the artifact and look at how the AI system may foster or level off power asymmetries. This holds practical consequences because it gives a theoretical framework for computer scientists and engineers interested in developing democratic AI systems or policymakers aiming at drafting legislation and building a democratic governance of AI. If democratic AI is a goal, those interested in developing it should ask: how could that design decision, that dataset, that way of extracting raw material, that line of code, that narrative, affect power relations? If that AI system can empower people and create more symmetrical power relations, then we can claim that the system is democratic.

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