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# 3. Power in AI and public policy Lena Ulbricht

# INTRODUCTION

Recent discourses about AI have stressed that it has the potential to shift power relations considerably and might even become a power in its own right and get out of control. Critics of AI warn that it is opening the door to massive discrimination against vulnerable populations and increased citizen oppression by governments, especially where it is used for public sector functions, for example public service provision, regulation and oversight, public health, security and welfare or infrastructure development. Public sector AI often involves the private sector, for example as provider of infrastructure, technology and services. The technologies are therefore often similar or identical to those deployed in the private sector, but become effective in the asymmetrical relationship between governments and populations. Critics of public sector AI stress that AI as a resource is unequally distributed and that it does not benefit all social groups in the same way. Others denounce AI as a tool of domination: "We specifically recognise that AI systems exacerbate structural imbalances of power, with harms often falling on the most marginalized in society" (Collective statement of 114 civil society organizations towards AIA 2021). In her Atlas of AI Kate Crawford points out how technical systems, that are often described as neutral, reinforce power structures and enable many forms of exploitation and abuse, including inhumane working conditions and environmental destruction (Crawford 2021). Advocates of public sector AI, on the contrary, expect better insights and steering capacity with regard to complex social problems and an improved societal self-determination, as Google's AI team puts it: "We believe that AI is a foundational and transformational technology that will provide compelling and helpful benefits to people and society through its capacity to assist, complement, empower, and inspire people in almost every field of human endeavor" (Manyika et al. 2023).

For many observers, AI is a tool which can increase the power of any social actor who can dispose of it, as former President of the European Research Council Helga Nowotny points out in a recent book about AI: "prediction is not primarily a technological means for knowing future outcomes, but a social model for extracting and concentrating discretionary power" (Nowotny 2021). Others argue that AI is no longer a tool for human use, but on the verge of getting out of hand and becoming a power in its own right. In May 2023, industry leaders signed a public statement stressing the risk of extinction from AI, which ignited heavy public debate (Roose 2023). MIT physics professor May Tegmark warns of the existential threat of what he calls "unaligned superintelligence": "We may soon have to share our planet with more intelligent 'minds' that care less about us than we cared about mammoths" (Tegmark 2023). Many more authors see AI as a potential threat to civilization (Freedland 2023). This "tool versus creature" debate about AI highlights opposed conceptions of power: if AI is a tool to achieve an end defined by a human or a collective of humans – how can it possibly be a power in its own right and extinguish civilization?

As these examples from recent public debates illustrate, contemporary societies are only starting to untangle the many facets of the power of AI and the relevant power struggles. This chapter therefore asks: *What is AI and how is it related to power relations? And what can those of us who study power contribute to the debate about public sector AI?* The chapter starts by developing a systematization of different conceptions of power that encompasses various ontological and dimensional distinctions of power. The next section scrutinizes how these conceptions of power relate to dominant discourses about the power of AI in public policy: the use of AI in public policy, recent initiatives to regulate AI, and AI-triggered systemic criticism and propositions for new social orders and utopias. The final section discusses the implications of the insights for our understanding of power and public sector AI.

# WHAT IS POWER?

Decades of social science research have outlined that power is formed, justified and executed in many ways, for example through violence, legitimacy, discourse, institutions, epistemology, subjectivation and hegemony. This section outlines a typology of power ontologies and dimensions which facilitate the analysis of public controversies about public sector AI.

#### **Power Ontologies**

Power is traditionally understood as the capacity of an actor to impose its will upon another, if necessary against resistance (Weber 2012). However, power is more than domination. A common distinction is the one between *relational power* ("power over"); and social *constitutional power* ("power to"). Relational power stresses relations of subordination between individuals and/or groups (Bourdieu 2010; Weber 2012). Social constitutional power has a focus on how social interaction enables actions or positions of individuals or groups (Arendt 1998). This ontological differentiation centres on *capability*, as it is concerned with the question of whether power as "the production, in and through social relations, of effects that shape the capacities of actors to determine their circumstances and fate" (Barnett and Duvall 2005).

Another important ontological distinction is that, other than in common sense, it is not only and not always an instrument to attain one's aim. Power can be a *resource*, but it can also be seen as an *effect*: power is seen as a resource to realize one's will, as a tool that serves an aim (Bourdieu 2010; Schmitt 2008; Weber 2012).<sup>1</sup> From a different perspective, power is something that cannot be owned, but rather an effect: the manifestation of social (or sociotechnical) relations (Schäfer 2016) that are often unequal. Foucault stresses that, while power is often intangible and invisible, practices and effects are observable and thus revealing about power structures in a given field (Foucault 1995). This perspective does not neglect the fact that resources might play a role in determining power relations. However, the analytic focus lies on how power plays out in specific *practices* and less on power *structures* (Castells 2016). I call this *ontological* differentiation *utilitarian*, because it focuses on the question of whether power is a utility (or not). A resource and an effect-centred definition of power are not mutually exclusive – they rather indicate a specific focus of the analysis. Effect-based definitions are strong when it comes to analyzing situations where relevant resources are not observable,

Power ontology	Analytic focus	Analytic strength
Ontology of capability: subording	ation vs constitution:	
Relational power, 'power over'	Focus on relations of subordination	Understanding the acting and thinking autonomy of
	between individuals and/or groups	specific actors (or acting agents)
Social constitutional power,	Focus on how social interaction	Understanding why some actions or ideas are possible
'power to'	enables actions or positions of	and others are not
	individuals or groups	
Utilitarian ontology (is power a i	utility or not): resource vs effect	
Power as a resource	Resource to realize one's will; tool	Strong in analyzing situations within which the
	that serves an aim	structures and resources that determine power are
		observable and relatively stable
Power as an effect	Manifestation of unequal social or	Strong when power structures and conditions are not
	sociotechnical relations; observable	observable and when power seems to constantly shift
	mainly in practices (and less in	and change its shape
	structures)	

#### Table 3.1Ontologies of power (what is the nature of power?)

when it is not clear which resources (or other influencing factors) determine power relations, who are the relevant agents (Hayward and Lukes 2008), or when power seems to constantly shift and change its shape. In addition, an effect-based power definition is less interested in the ultimate aim to which power contributes – it is open towards situations in which there is no clear aim or in which unintended or unexpected effects emerge (Foucault 1982). For a summary of different power ontologies, their analytic foci and strengths, see Table 3.1.

To acknowledge that power can be seen as an effect rather than a tool is crucial to understanding the narratives that see AI as a power in its own right, as a creature. From a resource-based perspective it is difficult to conceive of an AI system that grows until it escapes the control of those who have created and used it. If AI is a human-made tool, it is difficult to adhere to the idea that the tool might one day dominate its creators. Such a vision can only be sustained when assigning human attributes to digital technologies, a vision that many technological experts reject (Weizenbaum 1976). In order to understand why puppet-to-master narratives are so predominant, also in current AI debates, the effect-based conception of power is very illuminating: if AI is not (only) a tool to obtain power, but a set of structures and practices that lead to observable effects on the capacities and limitations of agents, AI can indeed outgrow the functions that were intended at the moment of its creation. For example, AI could in principle become the main epistemic and coordination mechanism in ever more social contexts (social welfare, adjudication, domestic security, education, etc.). Here, an effect-based power perspective allows us to conceive of a possible quasi-hegemony of AI, without reverting to anthropomorphism and without having to prove that such a development has been intended by its developers.

#### **Dimensions of Power**

If we want to have a comprehensive view of the power implications of AI, it is important to acknowledge that power manifests itself in many different ways and therefore has various dimensions. The subsequent systematization of power distinguishes between six *dimensions* of power.<sup>2</sup> All are connected to specific forms of power struggle and social conflict.

*Material power* designates how the distribution of material resources affects the capabilities of actors – be it countries, organizations or individuals. Material power struggles are a competition about scarce material resources, such as raw materials, territory, people, allies, artefacts, infrastructures, etc. Material perspectives on power have been dominant in international relations (Cowhey 1978), but also in the sociology of inequality of Bourdieu who differentiates between material power and cultural and social power (Bourdieu 2010).

*Communicative* or *discursive power* consists in language, expression, narratives and symbols that shape societal worldviews, meaning, perceptions, assessments and evaluations. Discursive power defines whose or which statements find acceptance and support; relevant struggles are about competing public frames and (e)valuations (Carstensen and Schmidt 2016). Foucault and Butler have for instance analyzed the many ways in which discourses become dominant and establish norms, values and ideologies that shape individual and collective identities and opportunities (see also subjectivational power below) (Butler 2006; Foucault 1982).

*Epistemic power* is concerned with what is considered as true, which methods of inquiry are accepted, and who is considered as legitimate epistemic authority. Epistemic power is especially important in feminist and decolonial thinking: Fanon sheds light on how colonial ideologies and knowledge structures are used to justify and perpetuate the exploitation and marginalization of colonized populations who internalize these dominant epistemologies and suffer a loss of self-confidence and identity (Fanon 2008). Struggles about epistemic power challenge dominant sources, forms and authorities of knowledge. Fanon called for counter-knowledges that challenge colonial representations and assert the agency and dignity of the colonized.

*Subjectivational or identitarian power* is centred on the process of individuals and social groups who, in response to discourses, norms, knowledge and practices, form identities and subjectivities that place them in specific social roles, power relations and power constellations. Foucault famously carved out how social institutions such as hospitals, schools and prisons contribute to the formation of subjectivities and identities that uphold the existing power order (Foucault 1995). Butler explains how gender subjectivities and identities cement or challenge the patriarchal social order (Butler 2006). Struggles about subjectivational and identitarian power centre on who belongs to a community, what determines an identity, and struggles between competing communities and identities.

*Institutional power* is power that is related to institutions, which can be formal or informal; material or symbolic. As Max Weber explains with regard to the authority of legal norms and procedures (Weber 2019), power relations are often implemented in and stabilized through institutional norms and practices, for example within schools and hospitals, in elections and welfare applications. Struggles arise when there is competition about institutional power positions or competition about institutional design.

*Hegemonic power* describes an entire system of ideology, practices and structures, that exert domination by one ruling class over another – for Gramsci the bourgeoisie (Gramsci et al. 2011); for Laclau and Mouffe neoliberal capitalism (1985). Hegemony is a state of power that reaches beyond punctual and unidimensional domination, but is relatively durable and based on a broad range of powers, including institutional, cultural and moral power, in a way that benefits from the consent of the dominated class. Struggles consist in competitions about hegemony and about the stabilization and destabilization of power structures, where counter-hegemonic efforts can try to challenge the existing order.

For an overview of the dimensions of power and related power struggles see Table 3.2.

Power dimension	Relevant questions	Power struggles
Material power	How are material resources distributed?	Competition about scarce material resources,
		such as raw materials, territory, people, artefacts,
		infrastructures etc.
Communicative/discursive power	Whose statements find acceptance and support?	Competing public frames, (e)valuations
Epistemic power	What is considered to be true?	Competing forms and sources of knowledge
Subjectivational/identitarian power	Who is part of a community? What determines an identity?	Competing identities and communities
Institutional power	How are power relations implemented	Competition about institutional power positions;
	in institutional norms and practices?	competition about institutional design
Hegemonic power	How wide is the reach of power	Competition about the stabilization and
	structures and how stable are they?	destabilization of power structures and relations
		and about the boundaries of power

#### Table 3.2Dimensions of power and power struggles

Depending on what we analyze, power takes on different forms. Yet, power concepts are not rivals; they can co-exist, but direct our gaze towards different aspects. As a consequence, many stories about the power of AI can be written, and it is time to systematically scrutinize current debates about the power in AI and public policy. It will help us understand the dominant foci and the blind spots and understand how meta-knowledge about the power implications of AI stabilizes or challenges the status quo. With this foundation, we can zoom in on the power implications of public sector AI.

# PUBLIC SECTOR AI AND POWER

There are many spaces where AI-related power is disputed, for example with regard to geopolitical power distributions, struggles around economic power and political competition. The following section will focus on the power implications of public sector AI: how public sector AI plays out in state-citizen relations and manifests as material, communicative, epistemic and subjectivational power; how regulation aims at balancing the power between those who deploy technologies and those who are subject to them, targeting institutional forms of power; and how AI can become the centre of systemic power critique and alternative utopias though a perspective of hegemonic power.

#### **Unequal Power: Public Sector AI as Technocratic Domination**

Drawing from the various forms of power introduced above, this section explains how public sector AI often promises to increase public service efficiency and effectiveness and potentially render public policy more democratic (Ulbricht 2020b). Governments all over the world express their hopes in AI as a tool of government that should serve citizens: "These disruptive technologies are spawning a myriad of services to citizens and therefore positively impact their daily lives by changing the way they take care of themselves, feed themselves and even the way of communication" (African Union 2020: 42–3). At the same time, AI has often been criticized for various forms of abuse and oppression, as epitomized in various power critiques.

The literature about AI and power covers all six outlined dimensions of power: a very common approach to the power implications of AI is to see it as a range of material resources and forms of value extraction and creation that determine the capacities and social position of those who have access to them and that are unevenly distributed between those who develop the systems and those who are subject to them (Flensburg and Lai 2023), but also between regions and nations; much in line with our definition of *material power*. Public sector AI seems to lead to novel forms of discrimination, exploitation and manipulation of users and citizen, etc. (European Commission 2021). Zuboff denounces the large-scale extraction of data, work and capital from users by their companies and governments in a system that she names surveillance capitalism (Zuboff 2019). Scholars who study the use of AI and algorithms in public services, have shown that these "new public analytics" (Yeung 2023) are often fuelled by a new public management ideology and result in the rationalization of public welfare and increased responsibilization and pressure on the most vulnerable populations (Dencik et al. 2018; Eubanks 2018, cf. af Malmborg and Trondal, Chapter 5 in this volume; Heidelberg, Chapter 4 in this volume; Sleep and Redden, Chapter 27 in this volume), known as "surveillance of the poor" and "social sorting" (Fourcade and Gordon 2020; Lyon 2014). As the initiative Coding Rights denounces:

we're critical of the idea of AI systems being conceived to manage the poor or any marginalized communities. These systems tend to be designed by privileged demographics, against the free will and without the opinion or participation from scratch of those who are likely to be targeted or 'helped,' resulting in automated oppression and discrimination from the Digital Welfare States that use Math as an excuse to skip any political responsibility. (Coding Rights 2021)

The importance of AI as an element of *discursive power* is also often mentioned: AI is seen as a vehicle of societal self-assessment, reflection and evaluation, and the origin of imaginaries about possible futures (Bareis and Katzenbach 2022). For instance, a recent study about public AI discourses highlights how the German government strategically uses its AI future vision to uphold a power constellation characterized by a close unity of politics and industry. This public AI discourse is supported by German media who largely ignore alternative AI narratives (Köstler and Ossewaarde 2022). Another analysis emphasizes how the discourse relating to the technical sophistication of AI systems shields the creators of the systems from public scrutiny and social accountability (Campolo and Crawford 2020).

The *epistemic power* of AI has been addressed by the abundant field of critical data and algorithm studies, revealing how data and models structure decisions and perpetuate social injustices. Similarly, feminist approaches strongly focus on the epistemic reproduction of power structures: "Traditional criticisms of AI converge on the possibility of creating true artificial intelligence, whereas a feminist argument looks instead to the cultural setting of AI – whose knowledge and what type of knowledge is to be represented" (Adam 1995). The growing and interdisciplinary research and public debates about fairness, accountability, transparency and ethics explore ways to critique data voracity, intrusive surveillance and the abusive use of AI (cf. Cobbe and Singh, Chapter 7; Aula and Erkkilä, Chapter 13; Rönnblom, Carlsson and Padden, Chapter 9 all in this volume). However, only those who have a deep understanding of the power structures of the societies within which AI plays out, acknowledge that deep social problems such as racist or sexist discrimination cannot be solved on the level of data sets and modelling, but need a profound critique of the broader epistemic context of AI production, use and regulation (Barabas et al. 2020; Miceli et al. 2022; Wachter et al. 2021; cf.

Lena Ulbricht - 9781803922171 Downloaded from https://www.elgaronline.com/ at 02/19/2025 09:51:38PM via Open Access. This work is licensed under the Creative Commons Attribution-NonCommercial-No Derivatives 4.0 License https://creativecommons.org/licenses/by-nc-nd/4.0/ Hong, Chapter 8 in this volume). As Miceli et al. acutely ask: "Why Talk About Bias When We Mean Power?" (2022). And the Coding Rights initiative claims: "We don't believe in a fair, ethical and/or inclusive AI if automated decision systems don't acknowledge structural inequalities and injustices that affect people whose lives are targeted to be managed by these systems. Transparency is not enough if power imbalances are not taken into account" (Coding Rights 2021). Indeed, AI systems evolve within other sociotechnical trends such as poverty, war, political polarization, democratic erosion, securitization, ecocide, neocolonial exploitation, etc. It is therefore clear that fairness and justice are too complex to be easily automated.

Finally, the *subjectivational* or *identitarian power* of AI is present in the accounts of how AI shapes user and citizen subjectivities and identities, creates and dissolves communities, and thereby opens and closes opportunities for thought and action: "Algorithms shape human behavior on various levels: they influence not only the aesthetic reception of the world but also the well-being and social interaction of their users" (Quadflieg et al. 2022). Relevant studies show how public sector AI can force identities onto individuals and groups, as in border technologies (Metcalfe and Dencik 2019) or data mining for population management (Johns 2017), but also how users actively engage with technologies and develop their subjectivities and identities, as in "quantified self"-movements (Lupton 2016), open source movements (Zhang and Carpano 2023) and as digital citizens (Ohme 2019). To acknowledge the subjectivational and identitarian power of AI also requires a public reflection upon the expertise and ethical norms of those who use AI, including public servants (cf. Busch and Henriksen, Chapter 6; Kaufmann, Chapter 22; and Krutzinna, Chapter 29, all in this volume).

Summing up, the first four dimensions of power (material, discursive, epistemic and subjectivational) are present in the debate about public sector AI. With regard to the different power ontologies, not surprisingly, the proponents of AI often deploy a social constitutional power concept and zoom in on the new opportunities offered by AI; while the AI critics stress the relational power of AI and emphasize the risk of oppression and the need for safeguards and defence against oppression. With regard to the tool-versus-creature duality, AI is pictured both as a tool and as an effect. AI as an effect of power is a perspective that is especially relevant in the debate about algorithmic discrimination and manipulation, where differential effects of algorithms between social groups can be observed, but where the power-related intentions of AI developers and users is often not clear.

While the present section focused on carving out the first four dimensions of power in the discourse about public sector AI, the next two sections will emphasize the other two dimensions of power: *institutional* power is often connected to regulatory debates; *hegemony-related* power conceptions nurture more systemic critique.

#### **Balancing Power: Current Attempts to Regulate AI**

In the face of many criticisms, regulatory initiatives have emerged to better distribute power in and through public sector AI: "Without proper regulation, AI systems will exacerbate existing societal harms of mass surveillance, structural discrimination, centralized power of large technology companies, the unaccountable public decision-making and environmental extraction" (Collective statement regarding EU AI Act, signed by 123 civil society organizations 2023).

Regulation, in its narrow sense as state control of companies and other market actors, for example consumers and public agencies who use AI (Baldwin et al. 2011), encompasses many ways in which power is institutionally entrenched. After decades of low regulatory activity,

this has changed in recent years. Some of the recent AI regulation aims at limiting the power of companies and citizens vis-a-vis users/citizens, for example by securing privacy rights (Bennett and Raab 2006), freedom of expression (Coche 2018), protection from online harm (Price 2022) and consumer protection (European Data Protection Supervisor 2014), to name a few. Other attempts try to strengthen the power of citizens and users in controlling and using digital technologies, as in public consultations (Rottinghaus and Escher 2020), civic tech (Gordon and Lopez 2019) and open government initiatives (Attard et al. 2015). While this chapter cannot delve into the important differences between AI regulation in the EU, China, the US and other jurisdictions (cf. Mügge, Chapter 19; Paul, Chapter 20; and Omotubora and Basu, Chapter 17, all in this volume), the overall outlook is rather dire: regulation mainly aims at preventing "social risk" through mostly liberal regulatory approaches which overburden individual users and citizens (Laux et al. 2022). And civic tech, instead of shifting the power balance towards citizens and civil society, often follows a technocratic paradigm (Kelty 2017; Ulbricht 2020b). Instead of achieving empowerment, they rather manage void procedures of participation and transparency.

#### AI as Object of Systemic Critique and Alternative Utopias

The disputes around AI are not only struggles around the distribution of a scarce resource or control of the existing technologies, but a critique of stable structures of domination, and the bone of content in larger ideological struggles that imply profound redistributions of power. To some observers, AI is a product of a capitalist, neoliberal or neocolonial *hegemony*: capitalism-critical approaches challenge for instance the socio-economic foundations of contemporary AI and denounce the extractivist and dehumanizing effects of AI (Crawford 2021; Dauvergne 2020):

A.I. is dangerous inasmuch as it increases the power of capitalism. The doomsday scenario is not a manufacturing A.I. transforming the entire planet into paper clips, as one famous thought experiment has imagined. It's A.I.-supercharged corporations destroying the environment and the working class in their pursuit of shareholder value. Capitalism is the machine that will do whatever it takes to prevent us from turning it off, and the most successful weapon in its arsenal has been its campaign to prevent us from considering any alternatives. (Chiang 2023)

Here, AI is seen as the element that achieves the legitimacy and stability of a stable structure of domination and is therefore foundational to hegemony.

Critique of hegemony opens up new ways of imagining the social order and power relations around AI: alternative social utopias for AI are, for example, communitarian approaches that promote collective creation and responsibility of technologies (Staab and Piétron 2021), as in commons-based, socialist, corporatist or cooperative structures.

Decolonial approaches emphasize the colonial legacy of the above-mentioned capitalist, extractivist, inhumane and patriarchal foundations upon which AI currently strives (Couldry and Mejias 2023; Ricaurte 2019, cf. Gray, Chapter 15 in this volume; Omotubora and Basu, Chapter 17 in this volume). They refer to the exploitation of primary resources, digital waste, inhumane labour conditions of data and crowd workers, and the unlawful collection of user data in the Global South and of vulnerable populations in humanitarian contexts. They also criticize the unequal business relations between the world-leading technology companies based mainly in the Global North, and Global South companies and governments, as well as

the economic and political expansionism of Global North governments in the Global South, which are often pressured to adopt their regulation to Northern standards, and to open their markets to Northern companies (Tait et al. 2022). They also stress how AI epistemically reinforces global injustice: Katz describes the ideology embedded in the concept of AI as one of supremacy and AI as based on "models of knowledge that assume white male superiority and an imperialist worldview" (Katz 2020). Decolonial counter-propositions stress human and environmental rights and dignity, regional and historical fairness, especially with regard to epistemic justice, and a diversification and decentralization of technology development, use and control: "We reject the premise that only wealthy white men get to decide what constitutes an existential threat to society … For people of color, women, LGBTQIA+ people, religious and caste minorities, indigenous people, migrants and other marginalized communities, technology has always posed an existential threat, it has repeatedly been harnessed to ensure our inferiority in societal power structures … We urge you to actively engage our deep expertise" (Tech experts from the Global Majority 2023) (e.g., on AIT uses for migration and border control see Molnar, Chapter 23 in this volume).

Feminist systemic critique of AI focuses on the effects of gender stereotypes and patriarchal social order on AI and its societal implications (Haraway 1991); pointing out the intersections of gender with other structures of oppression, such as class and race (Toupin 2023). Finally, feminist utopias often envision epistemic justice, diversity and decentralized and experimental forms of technology creation and control.

### CONCLUSION

The main bonus of returning to power theory is to understand that there is a rich legacy of social science research about power and domination which has yielded many different concepts of power. Another important insight is that each power concept has a different focus, history and analytic strength. Adopting a narrow power concept means to miss important aspects of the phenomena in which we are interested and not to explore the potential of power critique. From here, we can write genealogies of power in AI, anatomies of sociotechnical systems and scrutinize with precision how power is created, challenged, defended, transformed and so on.

In the debates about power in AI and public policy we find a variety of views regarding the *ontology of capability*: there is no opposition between relational (subordination) power and constitutional power, but rather a functional differentiation, where the proponents of public sector AI stress the opportunities of social constitutional power whereas its critics fear the adverse effects of relational power. In addition, fears of relational power seem to fuel new propositions for harnessing the constitutional power of AI. As to the *utilitarian ontology*, AI is seen as both resource and effect. It is clear that often, the precise responsibilities, effects and mechanisms are not yet clearly observable and defined. The current difficulty of assessing who is responsible for AI and what intentions are associated with it (if there are any), has directed the focus of critical AI researchers towards its observable societal effects, for example discrimination. We do not know in detail how ChatGPT or face-recognition software systems work, who uses them and with what intentions, but we can assess their effects on, for instance, policing, education or political communication. As a consequence, while in other domains, power is commonly rather seen as a tool than an effect, in the case of AI, the power-as-an-effect aspect has grown in importance and can certainly inspire other fields of analysis in which to

Lena Ulbricht - 9781803922171 Downloaded from https://www.elgaronline.com/ at 02/19/2025 09:51:38PM via Open Access. This work is licensed under the Creative Commons Attribution-NonCommercial-No Derivatives 4.0 License https://creativecommons.org/licenses/by-nc-nd/4.0/ societies it is not (yet) clear where the centre of power is located, where the line of conflict lies and what the broader social consequences are – as for example with regard to climate change. The insights relating to power in AI in its various dimensions, material, discursive, epistemic and subjectivational, highlight that we have left behind the times when AI was seen mainly as a technical object which could only be evaluated by technical experts. Major public debates, such as the one recently generated by ChatGPT, have called many societal actors to contribute to how they view AI and its power implications and therefore broadened the public perspective on it. Thus, the times when technical experts took most of the important decisions about AI, far removed from public scrutiny, are gone. However, as the public letter of experts from the Global South show, not all voices have the same weight. In addition, it is still an open question how the variety of power conceptions in AI translates into politics. A wide range of perspectives might never be represented in important decisions about AI.

A theory-based systematization of power in AI also allows us to dismiss the AI-out-of-control narrative as a red herring, to distract us from the less bombastic, subtle, but important consequences of AI becoming an increasingly pervasive mode of coordination. These consequences are less visible, but just as influential in the long run, and rely upon many large and small decisions that are being taken *today* and that need critical observation. To stay metaphorical: AI cannot become a creature, but it can become a single set of rules for each and every game that we play.

In the end, AI has the potential to do both: to obfuscate and to disclose power and oppression. Much has been written about the systemic and systematic opacity surrounding AI systems (Ananny and Crawford 2017; Burrell 2016). In this sense, AI has an immense potential to make violence invisible and to claim that domination is legitimate where it is not. At the same time, this opacity is increasingly challenged (Ulbricht 2020a), by public accountability claims, by new regulation, stricter adjudication, research investments in explainable and accountable AI, in systemic critique and in alternative technological utopias, creation, use.

#### NOTES

- 1. Through such a perspective AI can be seen as a tool to obtain something, for example military and economic supremacy or individual wealth, but also administrative efficiency, democratic legitimacy and individual autonomy.
- 2. The categories were chosen by the author with the aim of showing that there are various dimensions of power, drawing from influential power theories. The list of dimensions is not complete, however; there are more, especially when choosing fine-grained categories.

### REFERENCES

- Adam, A. (1995), 'Artificial intelligence and women's knowledge', *Women's Studies International Forum*, **18** (4), 407–15.
- African Union (2020), *The Digital Transformation Strategy for Africa (2020–2030)*, 18 May, accessed 26 July 2023 at https://au.int/sites/default/files/documents/38507-doc-dts-english.pdf.
- Ananny, M. and K. Crawford (2017), 'Seeing without knowing: Limitations of the transparency ideal and its application to algorithmic accountability', *New Media & Society*, 33 (4), 1–17.
- Arendt, H. (1998), The Human Condition, 2nd ed., Chicago: University of Chicago Press.
- Attard, J., F. Orlandi, S. Scerri and S. Auer (2015), 'A systematic review of open government data initiatives', *Government Information Quarterly*, **32** (4), 399–418.

- Baldwin, R., M. Cave and M. Lodge (2011), *Understanding Regulation: Theory, Strategy, and Practice*, 2nd ed., Oxford and New York: Oxford University Press.
- Barabas, C., C. Doyle, J. Rubinovitz and K. Dinakar (2020), 'Studying up: Reorienting the study of algorithmic fairness around issues of power', in *Proceedings of the 2020 Conference on Fairness*, *Accountability, and Transparency*, Barcelona, Spain: ACM, pp. 167–76.
- Bareis, J. and C. Katzenbach (2022), 'Talking AI into being: The narratives and imaginaries of national AI strategies and their performative politics', *Science, Technology, & Human Values*, 47 (5), 855–81.
- Barnett, M. and R. Duvall (2005), 'Power in international politics', *International Organization*, **59** (1), 39–75.
- Bennett, C. J. and C. D. Raab (2006), *The Governance of Privacy: Policy Instruments in Global Perspective*, 2nd ed., Cambridge, MA: MIT Press.
- Bourdieu, P. (2010), Distinction: A Social Critique of the Judgement of Taste, London: Routledge.
- Burrell, J. (2016), 'How the machine "thinks": Understanding opacity in machine learning algorithms', *Big Data & Society*, **3** (1), 1–12.
- Butler, J. (2006), Gender Trouble: Feminism and the Subversion of Identity, New York: Routledge.
- Campolo, A. and K. Crawford (2020), 'Enchanted determinism: Power without responsibility in artificial intelligence', *Engaging Science, Technology, and Society*, 6, 1–19.
- Carstensen, M. B. and V. A. Schmidt (2016), 'Power through, over and in ideas: Conceptualizing ideational power in discursive institutionalism', *Journal of European Public Policy*, 23 (3), 318–37.
- Castells, M. (2016), 'A sociology of power: My intellectual journey', *Annual Review of Sociology*, **42** (1), 1–19.
- Chiang, T. (2023), 'Will A.I. become the new McKinsey?', *The New Yorker* (4 May). Available at: https://www.newyorker.com/science/annals-of-artificial-intelligence/will-ai-become-the-new-mckinsey.
- Coche, E. (2018), 'Privatised enforcement and the right to freedom of expression in a world confronted with terrorism propaganda online', *Internet Policy Review*, 7 (4), accessed at https://doi.org/10.14763/ 2018.4.1382.
- Coding Rights (2021), Why is A.I. a Feminist Issue?, accessed 26 July 2023 at https://notmy.ai/about/.
- Collective statement of 114 civil society organisations towards AIA (2021), *An EU Artificial Intelligence Act for Fundamental Rights. A Civil Society Statement*, accessed 26 July 2023 at https://edri.org/wp -content/uploads/2021/12/Political-statement-on-AI-Act.pdf.
- Collective statement regarding EU AI Act, signed by 123 civil society organizations (2023), 'European Parliament: Make sure the AI act protects peoples' rights!', accessed 26 July 2023 at https://www .amnesty.eu/news/european-parliament-make-sure-the-ai-act-protects-peoples-rights/.
- Couldry, N. and U. A. Mejias (2023), 'The decolonial turn in data and technology research: What is at stake and where is it heading?', *Information, Communication & Society*, **26** (4), 786–802.
- Cowhey, P. F. (1978), 'Power and Interdependence: World Politics in Transition, by Robert O. Keohane and Joseph S. Nye, Jr.', Political Science Quarterly, **93** (1), 132–34.
- Crawford, K. (2021), *The Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*, New Haven, CT: Yale University Press.
- Dauvergne, P. (2020), AI in the Wild: Sustainability in the Age of Artificial Intelligence, Cambridge, MA: MIT Press.
- Dencik, L., A. Hintz, J. Redden and H. Warne (2018), Data Scores as Governance: Investigating Uses of Citizen Scoring in Public Services [Project Report], Open Society Foundations, Cardiff University, accessed at http://orca.cf.ac.uk/117517/.
- Eubanks, V. (2018), Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor, New York: St. Martin's Press.
- European Commission (2021), Algorithmic Discrimination in Europe: Challenges and Opportunities for Gender Equality and Non Discrimination Law, Brussels: Publications Office of the European Union.
- European Data Protection Supervisor (2014), Privacy and Competitiveness in the Age of Big Data: The Interplay between Data Protection, Competition Law and Consumer Protection in the Digital Economy, Brussels, March, accessed 26 July 2023 at https://edps.europa.eu/sites/default/files/ publication/14-03-26\_competitition\_law\_big\_data\_en.pdf.

Fanon, F. (2008), Black Skin, White Masks, 1st ed., new ed., New York: Grove Press.

Flensburg, S. and S. S. Lai (2023), 'Follow the data! A strategy for tracing infrastructural power', *Media and Communication*, **11** (2), 319–29.

Foucault, M. (1982), 'The subject and power', Critical Inquiry, 8 (4), 777-95.

Foucault, M. (1995), Discipline and Punish: The Birth of the Prison, 2nd ed., New York: Vintage Books.

- Fourcade, M. and J. Gordon (2020), 'Learning like a state: Statecraft in the digital age', *Journal of Law and Political Economy*, **1** (1), 78–108.
- Freedland, J. (2023), 'The future of AI is chilling humans have to act together to overcome this threat to civilization', *The Guardian*, 26 May, accessed 26 July 2023 at https://www.theguardian.com/ commentisfree/2023/may/26/future-ai-chilling-humans-threat-civilisation.
- Gordon, E. and R. A. Lopez (2019), 'The practice of civic tech: Tensions in the adoption and use of new technologies in community based organizations', *Media and Communication*, 7 (3), 57–68.
- Gramsci, A., J. A. Buttigieg and A. Callari (2011), *Prison Notebooks. Vol. 1*, Paperback ed., New York: Columbia University Press.

Haraway, D. J. (1991), Simians, Cyborgs, and Women: The Reinvention of Nature, New York: Routledge.

- Hayward, C. and S. Lukes (2008), 'Nobody to shoot? Power, structure, and agency: A dialogue', *Journal* of Power, 1 (1), 5–20.
- Johns, F. E. (2017), 'Data mining as global governance', in R. Brownsword, E. Scotford, and K. Yeung (eds), Oxford Handbook on the Law and Regulation of Technology, Oxford: Oxford University Press, pp. 776–98.
- Katz, Y. (2020), *Artificial Whiteness: Politics and Ideology in Artificial Intelligence*, New York: Columbia University Press.
- Kelty, C. M. (2017), 'Too much democracy in all the wrong places: Toward a grammar of participation', *Current Anthropology*, 58 (S15), 77–90.
- Köstler, L. and R. Ossewaarde (2022), 'The making of AI society: AI futures frames in German political and media discourses', AI & Society, 37 (1), 249–63.
- Laclau, E. and C. Mouffe (1985), *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*, London: Verso.
- Laux, J., S. Wachter and B. Mittelstadt (2022), 'Trustworthy artificial intelligence and the European Union AI act: On the conflation of trustworthiness and the acceptability of risk', SSRN Electronic Journal, accessed at https://doi.org/10.2139/ssrn.4230294.
- Lupton, D. (2016), The Quantified Self: A Sociology of Self-Tracking, Cambridge, MA: Polity.
- Lyon, D. (2014), 'Surveillance, Snowden, and big data: Capacities, consequences, critique', *Big Data & Society* (July–December), 1–13.
- Manyika, J., J. Dean, D. Hassabis, M. Croak and S. Pichai (2023), *Why We Focus on AI (and to What End)*, accessed 26 July 2023 at https://ai.google/why-ai/.
- Metcalfe, P. and L. Dencik (2019), 'The politics of big borders: Data (in)justice and the governance of refugees', *First Monday*, 24 (4), accessed at https://doi.org/10.5210/fm.v24i4.9934.
- Miceli, M., J. Posada and T. Yang (2022), 'Studying up machine learning data: Why talk about bias when we mean power?', Proceedings of the ACM on Human-Computer Interaction, 6 (GROUP), 1–14.
- Nowotny, H. (2021), *In AI We Trust: Power, Illusion and Control of Predictive Algorithms*, Medford, MA: Polity Press.
- Ohme, J. (2019), 'Updating citizenship? The effects of digital media use on citizenship understanding and political participation', *Information, Communication & Society*, **22** (13), 1903–28.
- Price, L. (2022), 'Platform responsibility for online harms: Towards a duty of care for online hazards', *Journal of Media Law*, 2022 (Online First), accessed at https://doi.org/10.1080/17577632.2021 .2022331.
- Quadflieg, S., K. Neuburg and S. Nestler (eds) (2022), (Dis)Obedience in Digital Societies: Perspectives on the Power of Algorithms and Data, Edinburgh: Edinburgh University Press.
- Ricaurte, P. (2019), 'Data epistemologies, the coloniality of power, and resistance', *Television & New Media*, 20 (4), 350–65.
- Roose, K. (2023), 'A.I. Poses "Risk of Extinction," Industry Leaders Warn', *The New York Times*, 30 May, accessed 26 July 2023 at https://www.nytimes.com/2023/05/30/technology/ai-threat-warning .html.
- Rottinghaus, B. and T. Escher (2020), 'Mechanisms for inclusion and exclusion through digital political participation: Evidence from a comparative study of online consultations in three German cities', *Zeitschrift Für Politikwissenschaft*, **30** (2), 261–98.
- Schäfer, H. (2016), Praxistheorie: Ein Soziologisches Forschungsprogramm, Bielefeld: transcript.

Schmitt, C. (2008), Concept of the Political: Expanded Edition, Chicago: University of Chicago Press.

- Staab, P. and D. Piétron (2021), 'Würde. Gemeinwohlorientierte Plattformen als Grundlage sozialer Freiheit', in C. Piallat (ed.), *Der Wert der Digitalisierung: Gemeinwohl in der digitalen Welt*, Bielefeld: transcript, pp. 187–206.
- Tait, M. M., A. E. dos Reis Peron and M. Suárez (2022), 'Terrestrial politics and body-territory: Two concepts to make sense of digital colonialism in Latin America', *Tapuya: Latin American Science, Technology and Society*, 5 (1), 2090485.
- Tech experts from the Global Majority (2023), 'Digital-justice and human-rights experts from around the globe raise concerns about the white-male-dominated AI debate\*', accessed 26 July 2023 at https://codingrights.org/en/library-item/open-letter-to-news-media-and-policy-makers-tech-experts-from-the-global-majority/.
- Tegmark, M. (2023), 'The "don't look up" thinking that could doom us with AI', *Time*, 25 April, accessed 26 July 2023 at https://time.com/6273743/thinking-that-could-doom-us-with-ai/.
- Toupin, S. (2023), 'Shaping feminist artificial intelligence', *New Media & Society*, **26**, https://doi.org/10 .1177/14614448221150776.
- Ulbricht, L. (2020a), 'Algorithmen und politisierung', Leviathan, Sonderband 35/2020 (Ent-)Politisierung? Die Demokratische Gesellschaft Im 21. Jahrhundert, 253–78.
- Ulbricht, L. (2020b), 'Scraping the demos. Digitalization, web scraping and the democratic project', Democratization, Special Issue Democratization beyond the Post-Democratic Turn. Political Participation between Empowerment and Abuse, 27 (3), 426–42.
- Wachter, S., B. Mittelstadt and C. Russell (2021), 'Why fairness cannot be automated: Bridging the gap between EU non-discrimination law and AI', *Computer Law & Security Review*, 41, 105567.
- Weber, M. (2012), *Max Weber: The Theory of Social and Economic Organization*, Mansfield Centre, CT: Martino Publishing.

Weber, M. (2019), Economy and Society, Cambridge, MA: Harvard University Press.

- Weizenbaum, J. (1976), Computer Power and Human Reason: From Judgment to Calculation, San Francisco: Freeman.
- Yeung, K. (2023), 'The new public analytics as an emerging paradigm in public sector administration', *Tilburg Law Review*, **27** (2), 1–32.
- Zhang, B. and D. Carpano (2023), 'Chromium as a tool of logistical power: A material political economy of open-source', *Big Data & Society*, **10** (1), 1–12.
- Zuboff, S. (2019), The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power, New York: PublicAffairs.