Introduction

Strengthening relations with citizens is a sound investment in better policy-making and a core element of good governance. It allows governments to tap new sources of policy-relevant ideas, information and resources when making decisions. Equally important, it contributes to building public trust in government, raising the quality of democracy and strengthening civic capacity. (OECD, 2001, p.1)

What role does artificial intelligence (AI) play in the citizen–government relations? Who is using this technology and for what purpose? How does the use of AI influence power relations in policy-making, and the trust of citizens in democratic institutions? These questions led to the writing of this book. While the early developments of e-democracy and e-participation can be traced back to the end of the 20th century, the growing adoption of smartphones and mobile applications by citizens, and the increased capacity of public administrations to analyze big data, have enabled the emergence of new approaches. Online voting, online opinion polls, online town hall meetings, and online discussion lists of the 1990s and early 2000s have evolved into new generations of policy-making tactics and tools, enabled by the most recent developments in information and communication technologies (ICTs) (Janssen & Helbig, 2018). Online platforms, advanced simulation websites, and serious gaming tools are progressively used on a larger scale to engage citizens, collect their opinions, and involve them in policy processes (Koliba, Zia, & Lee, 2011).

The increasing use of digital technologies in citizen–government relations responds to (1) a demand to digitize public services and make them more efficient, (2) a demand for increased citizen participation in policy-making, and (3) a political will to make public administration data available as discussed below.

First, this adoption of digital technologies by public administrations responds to a growing demand to digitize public action (de Feraudy, 2019). This digital imperative stems from the rapid adoption of digital technologies in Europe. In 2018, it was estimated that 56% of individuals living in the European Union (EU) use social media, and 48% used social media platforms every day or nearly every day in 2019 (Statistica, 2020). According to the Global Web Index, in 2020 internet users aged 16 to 64 were spending an average of two hours and 24 minutes daily on social media.
Artificial intelligence and democracy

It is acknowledged, after more than 20 years of research and practice in the field of digital government and the transformation of government through ICT-based reforms, that existing structures will require modification to take complete advantage of the benefits offered by technology (Fountain, 2001; Weerakkody & Dhillon, 2008). For instance, the White Paper on Artificial Intelligence – A European approach to excellence and trust [COM (2020) 65 final] argues that “it is essential that public administrations, hospitals, utility and transport services, financial supervisors, and other areas of public interest rapidly begin to deploy products and services that rely on AI in their activities” (p.65). AI is used for instance by some local governments in the form of an AI-powered social bot to optimize online interaction with citizens and respond to the most common questions. It is thus important to examine how ICTs are transforming policy-making and the relationship between governments and citizens (Janssen & Helbig, 2018).

Second, this digital imperative cumulates with the participatory imperative already weighing on the construction, implementation, and evaluation of public policies (de Feraudy & Saujot, 2017). The idea that encouraging citizen participation can improve the workings of a democracy is echoed in the political analysis of Touraine (1992) who contends that there cannot be any form of democracy without freedom of political choice. This negative concept of democracy and freedom, explained notably by Isaiah Berlin (1969) and Karl Popper (2005), highlights the centrality of citizen participation in democracy.

Citizen participation includes both conventional (e.g. elections) and non-conventional forms of participation (e.g. demonstration). As Rosanvallon and Goldhammer argue

(…) democratic activity now extends well beyond the framework of electoral-representative institutions (…). The resulting system is complex but, in its own way, coherent. What these various counter-democratic powers have in common is that they describe a new architecture of separated powers and a much more subtle political dynamic than one ordinarily finds in political theory. (Rosanvallon & Goldhammer, 2008, p.249)

Street protests and activism abound in cities around the world and on the internet and social media platforms. Such forms of political participation emerge to express the demands of populations for greater equity, solidarity and to denounce the inaction of politicians on global issues such as climate change. To respond to this new participatory imperative, some governments are offering online and offline participatory instruments (e.g. civic tech, collective intelligence, town hall meetings). This is what Surowiecki (2004) identifies as the wisdom of crowds, while Linders (2012) refers to the shift from e-government to we-government. The latter insists on the new active role that citizens take: they become co-producers of public policies, either in the
form of citizen sourcing (consultation and ideation), government as a platform (information and incentive), or do-it-yourself government (self-organization).

Third, governments make their data available. This is not a new phenomenon: it has been the case for several decades already. What is new, however, is the political will to make all this data available (Harrison et al., 2012). Since 2003, the European Commission (EU) and, in 2009, the American administration, have multiplied their calls for openness (European Commission, 2003; Obama, 2009). These new open data policies aim to make all digital and non-digital government information assets accessible in easy-to-use and digitized formats (Zuiderwijk & Janssen, 2014). Making this publicly funded data available also aims to increase the return on public investment (Arzberger et al., 2004). Open data allows citizens and entities outside of the government to contribute to the policy-making process (European Commission, 2010) and thus become “democratic innovators” (Maier-Rabler & Huber, 2011). This leads to a transfer of data and a transfer of knowledge from inside to outside government (Janssen, Charalabidis, & Zuiderwijk, 2012).

This shift from inside to outside government affects the traditional power relationship between government and the broader environment (Janssen & Helbig, 2018). Because citizens often lack time and expertise, other entities exploit the data made available by public administrations and develop new business models (Zuiderwijk & Janssen, 2014). This represents a risk that these open data policies mainly benefit those who have more resources and expertise, and thus strengthen their argumentation and their own position in the policy-making process.

The increasing use of digital technologies in citizen–government relations presents indeed some challenges. Sometimes perceived as the “go to” solution for the disenchantment of democracy, digital technologies are no panacea of course. Technology was often pursued as an objective in itself, symbolizing modernity more than a desire to really transform participation. E-government and e-participation projects are sometimes based on a certain fetishism of functionalities (e.g. the possibility to “like” contributions) without an a priori needs assessment (Albarède, de Feraudy, Marcou, & Saujot, 2018). What is more, initiatives can be used as a form of veiled rhetoric or as a political marketing strategy for politicians. Many online citizen consultations use closed source or proprietary code platforms with very little or no feedback about the result of the participation (Santini & Carvalho, 2019). Furthermore, behind the participatory processes, other power structures can be hidden (Pickard, 2008) acting in the interest of small groups. Lastly, and maybe most importantly, many citizens lack critical awareness regarding the type of technology used, the actors developing and managing the platform, the actors supporting the initiative, the transparency and accountability of data processing, and questions of cybersecurity and data privacy.
This book is the result of a research project funded by the Swiss National Science Foundation\(^1\) that aimed to explore the opportunities and challenges that AI presents for European liberal democracies. Hence, democracy was our starting point. As we are entering a time of rapid social, economic, political, environmental, and technological transformation, liberal democracy remains the best form of governance, and consequently requires all our attention and care. Inclusive citizen participation based on freedom of opinion and expression are necessary today more than ever to overcome the upcoming global challenges and provide the necessary legitimacy that democratically elected governments need. And when it comes to technologies used in the context of democratic processes, it is important to avoid having the big tech companies make all the decisions. It is up to the populations and their political representatives to decide what role technologies should play in society.

This book considers technology from a (co-)evolutionary innovation studies perspective. By bridging the gap between determinist theories and social constructivism, (co-)evolutionary innovation studies consider technology simultaneously as an active force of change in society, and perceive it as structure, institution, or actor, as well as the result of the design and choices of some social and economic actors (Just & Latzer, 2017). In other words technology can be considered simultaneously as tools and as the outcome of governance (Katzenbach, 2012). This (co-)evolutionary innovation studies framework acknowledges that technology has a form of political agency in society and international relations, and that technology is perpetually developing, with no clear beginning and no end. This approach was adopted by Shah and Kesan (2003, 2010), to highlight the governing role of software, and by Just and Latzer (2017) to examine machine learning algorithms of online platforms.

Moreover, this book considers technology both as a key force of production and a defining mode of social organization and control (Franklin, 2015; Galloway, 2004). With origins in sociology and literary criticism, the Frankfurt School, and more broadly critical theories, aim to shed light on the conditions that enslave people, and seek “to liberate human beings from the circumstances that enslave them” (Horkheimer, 1982, p.244). It contends that social problems are influenced and generated more by societal structures and cultural assumptions than by individual and psychological causes (Geuss, 1981). These theories emerged in relation to social movements, including LGBTIQ+ minorities.\(^2\) In both the broad and the narrow senses, critical theory offers the descriptive and normative bases for social inquiry that seeks to diminish domination and increase freedom in all its dimensions (Bohman, 2021), including in the digital realm (Fuchs, 2021).

The choices made by designers and developers are not neutral and correspond to their view of the world, their culture, their preferences, and their social status. These choices and values are not visible to the user and yet they
influence and shape how technology is used, who can use this technology and for what purpose. Design Justice provides a valuable framework for examining who designs and benefits from technologies, and offers innovative solutions based on participatory design principles for strengthening their appropriation and contributing to their adoption by a wider public, including the populations who have the most disengaged from democratic participation (i.e. poorest and least educated, women, trans folks, BIOPC, disabled people, and other marginalized communities). Design Justice aims explicitly to challenge, rather than reproduce, structural inequalities (Costanza-Chock, 2020).

In the context of a geopolitical struggle between autocracy vs. democracy, and where technology and information are weaponized to win the hearts and minds of populations, this book explores how AI mediates the citizen–government relations. Strengthening this relation is crucial as “it contributes to building public trust in government, raising the quality of democracy and strengthening civic capacity” (OECD, 2001, p.1). The relations between governments and citizens span a wide range of interactions at each stage of the policy-making cycle: from problem identification to policy design, through implementation to evaluation. Digital technologies can prove helpful in three main areas: (1) enhancing access to information so that citizens are well informed, (2) enabling citizens to express their views on projects and societal issues that affect them in consultations, (3) engaging citizens in decision-making processes (OECD, 2001). Moreover, many governments responded to the demand of digitizing public action with new e-government services to (a) optimize the effectiveness and efficiency of government services, (b) place the citizen at the center of the design of services rendered by organizations, and (c) increase trust in governments (OECD, 2020).

Among all the digital technologies used, AI has a special place. This book considers AI as “a generic term that refers to any machine or algorithm that is capable of observing its environment, learning, and based on the knowledge and experience gained, taking intelligent action or proposing decisions. There are many different technologies that fall under this broad AI definition. At the moment, ML4 techniques are the most widely used” (Craglia et al., 2018, p.18). But AI is also a (1) blurry (i.e. conceptual challenges, ongoing developments and multiple applications), (2) sometimes unreliable (i.e. AI technical or adversarial vulnerabilities, data and algorithm bias), and (3) often opaque (i.e. black box phenomenon) technological agent with (4) various degrees of agency (i.e. capacity to observe its environment, learn from it, and take smart action or propose decisions). While governments are introducing this new technology that offers unprecedented opportunities to increase the efficiency and effectiveness of public action, they must also ensure that it does not contradict core values of liberal democracies.
This book argues that governments may become risk makers when introducing AI in their interactions with citizens, if this introduction is not done according to principles of equality, freedom, and human rights. The risk-taker role differs indeed from the risk-maker in the sense that the decision-maker is the one affected by the consequences of their decision (vs. affecting others). When adopting new technologies, and especially when the new technology is not mature in its development, early adopters may face mistakes, which then may jeopardize the confidence of later adopters in the technology (Dzindolet, Peterson, Pomranky, Pierce, & Beck, 2003). Otherwise, the introduction of AI may change how citizens perceive not only this technology but also their agency and their role in the citizen–government relations.

Tulloch and Lupton (2003) argue that voluntary risk-taking is an “activity in which individuals engage, is perceived by them to be in some sense risky, but is undertaken deliberately and from choice” (pp.10–11). This definition highlights three important elements: (1) reflexivity (or consciousness) that one is taking a risk, (2) capacity (or agency) to make the decision to take the risk, and (3) the voluntary aspect of the decision, which is shaped by social conditions to some extent (Zinn 2015). However, as this book highlights, the AI-mediation of citizen–government relations remains often opaque to the citizen. This leads to question the “voluntary” aspect of the risk-taking role of civil society. And if this use becomes visible, will citizens continue to believe in popular sovereignty once their interactions with the government are systematically mediated by a distrusted version of AI?

Scholars have attempted to explore how and when a society becomes another (Koselleck, 1979; Castoriadis, 1997). Lefort (1988a) examined the transformational role of imaginary in politics and argued that a new political system emerges with the “mutation of the symbolic order” (Lefort, 1986, p.284). For instance, the Enlightenment saw the emergence of individuals autonomous from God, and therefore who could decide for themselves how to organize their collective life without the intermediation or validation of God. This new understanding of the individual led to the transformation of social relations, which “are assumed to be organized, to escape indeterminacy, and to be subject to the will and understanding of human beings” (Lefort, 1988b, p.93). This principle of autonomy (Castoriadis, 1997), and the ontological rupture that it represented in Western Europe, led individuals and society to conceive politics based on principles of equality, freedom, human rights, and the notion of popular sovereignty (Lefort, 1988a).

Popular sovereignty structures the political imaginary of democracy (Diehl, 2019) and forms a “symbolic matrix of democracy” (Lefort, 1986). The principles of equality, freedom, and human rights are the criteria that legitimize political power, and become the normative horizon of democracy (Diehl, 2019). This is illustrated by the French Declaration of Human Rights of 1793,
and more recently, in the European Convention on Human Rights (ECHR). By developing a common understanding of their social existence, social imaginary enables “common practices and a widely shared sense of legitimacy” (Taylor, 2003, p.23) within a nation. But the political imaginary of liberal democracies is in fact constituted of two levels. On the one hand, the normative structure of democracy is settled by a “major imaginary signification that works as the primary reference of democratic representation: popular sovereignty”, and on the other hand “social norms manifested through social practices, which are culturally and historically variable” (Diehl, 2019, p.411). These two layers of political imaginary can interact with each other and are interdependent, but do not necessarily have the same temporality. In other words, a political system can simultaneously be grounded in democratic values and tolerate non-democratic practices.

Diehl (2019) highlights these contradictions in democratic societies. On the one hand, liberal democracies are grounded in human rights principles and norms, and on the other hand, they tolerate non-democratic practices for long periods of time after the adoption of such norms, as was the case for women’s suffrage. Moreover, this paradox is quite visible at the level of political representations, which at times mix democratic and non-democratic imagery. Diehl (2019) gives the example of the “French mix of revolutionary symbols with the ostentatious style of the monarchy until the present day” (p.410). By distinguishing between these two aspects of the political imaginary, Diehl (2019) contributes to an understanding of how some non-democratic social norms and practices can persist in a democratic system, without necessarily threatening its existence.

As this book illustrates, AI is used in many instances of interaction between citizens and governments. When AI mediates citizens’ access to information, citizens’ consultations, and their free participation in policy decisions and votes, it introduces a degree of risk and uncertainty that contradicts not only the rationale to use these technologies, but also the political imaginary of democracy. Can European liberal democracies tolerate these practices that erode popular sovereignty without mutating toward a different type of political system? Is AI contributing to “a mutation of the political imaginary” to quote Diehl (2019, p.412)?

The methodological approach followed to achieve the objectives of this book is based on literature review, conceptualization, in-depth case study, and consultation with experts from academia, think tanks, national and sub-national governments, and industry, through workshops, focus groups, and individual interviews. Following the inception phase of the research, which defined the approach to be followed, an exploratory analysis to identify the key challenges and promises for the use of AI in policy-making was conducted. In parallel to this activity, an extensive and multidisciplinary review of the scientific and
gray literature was conducted, which included a literature and policy review, and identifying key research gaps, theoretical frameworks, and real-world use cases. The documents included policy documents from the EU, as well as other international institutions such as the OECD, UNESCO, and World Economic Forum. This review led to the identification of emerging practices in continental Europe (27 EU Member States, United Kingdom, Norway and Switzerland).

After this first step, a series of semi-structured interviews were conducted with 40 experts on the use and impact of AI in policy-making processes. The aim was to gather their views on the promises and challenges of AI in the citizen–government relations. The experts consulted were selected based on their expertise in citizen participation, online platforms, and artificial intelligence. They were identified through literature review and snowballing. A multidisciplinary workshop on the promise of AI for policy-making was held in December 2020 to validate the research findings, and in particular the initial results of the literature review and expert interviews. This workshop first addressed various conceptions of AI (the gap between reality and expectations, education challenges, and media frames). It then considered the promises of AI for fostering citizen mobilization, as well as its pitfalls. It also explored how AI could support collective intelligence processes, including civic tech. It discussed how AI could transform the role and the making of citizens, and finally illustrated key promises of AI for governments (Duberry et al., 2020).

This book is structured as follows. The first chapter presents some key elements for understanding artificial intelligence and its numerous uses. It examines how AI is used to optimize the efficiency and effectiveness of government services. Based on a taxonomy developed by Misuraca and Van Noordt (2020), it shows that AI is increasingly used in the fields of healthcare, education, social and cultural services since it can be considered useful for six types of government challenges: allocating resources, analyzing large datasets, overcoming the shortage of experts, predicting scenarios, managing procedural and repetitive tasks, and diverse data aggregation and summarization. The rest of the book focuses on citizen participation in policy-making.

The second chapter discusses the policy entrepreneurial role of civil society. The Multiple Streams Framework (MSF) is a powerful conceptualization of the policy process, and specifically agenda-setting (Kingdon, [1984], 2011). It argues that policy entrepreneurs need resources (e.g. technology) and specific skills (e.g. engaging multiple audience) to develop and implement tactics (e.g. narrative reframing) through problem, policy and politics streams, to identify and exploit successfully open policy windows. The participation of citizens in policy-making is a direct expression of popular sovereignty. It is based on the assumption that citizens are (1) well informed and are provided with (2)
instance of consultation and (3) decision. The next chapters explore the use of AI in these three areas.

The third chapter examines the use of AI by online platforms, and how it affects access to reliable, relevant and easy-to-find information (OECD). AI enables these platforms to automate information distribution flows, and in particular to rank, filter, and diffuse information. This leads to phenomena such as filter bubble and echo chambers. In this context, the algorithms of social media platforms (in their current development stage) do not benefit civil society and its capacity to make well-informed decisions. However, social media platforms also offer civil society organizations and social movements an unprecedented opportunity to develop creative advocacy campaigns in order to have their voice heard. They offer a new avenue for civil society to influence policy-making process, or a new policy space according to Leach, Stirling, and Scoones’ (2010) definition.

Popular sovereignty is possible when citizen participation is free of any form of coercion, and privacy is secured. Chapter four examines AI-based surveillance tactics and tools from public and private actors. Intelligence services and governments benefit from big data available today. Mass surveillance for national security purposes, as well as digital listening to identify unmet needs in the population are now common practice. Personal data are also collected and then commercialized by a large spectrum of private actors including the Alphabet – Meta digital ads duopoly. By increasing the precision, scale and scope of data collected and processed, these AI-powered surveillance practices also increase citizens’ exposure to cybercrimes.

Chapter five explores a world of perpetual political communication and campaigning, where AI enables the automation of digital advertising. Based on the vast amount of data collected by online platforms and other data brokers, one can know with great accuracy how citizens think, what triggers their emotions and decisions. When this “knowledge” is combined with a great ability to reach each individual with a personalized message on a national scale, then one has in one’s hands a great power to influence and persuade. The fact that these costly tools are mainly in the hands of governments, political leaders and parties erodes trust and increases an asymmetry of power between citizen and governments. Power lies in the hands of those who hold data and benefit from the AI-powered computational tactics and tools.

Citizens need access to reliable, relevant and easy-to-find information to form their opinion and make political decisions. Chapter six explores AI-based disinformation tactics and tools. Disinformation campaigns target the established trust between citizen and governments, as well as their trust in the information ecosystem itself. They are part of a global power play to reduce the influence of liberal democracies and democratic values in the world. They must also be understood from this global perspective. AI is at the center of this
battlefield: when enabling the diffusion of false news (i.e., by controlling the distribution of content online) and when mitigating their dissemination (i.e., automated content moderation and fact-checking).

The last chapter explores civic technologies. Civic tech refers to technology that aims to increase and deepen democratic participation. They are primarily intended to complement conventional citizen participation and channels of communication previously monopolized by governmental and intergovernmental institutions, as well as address challenges that may be invisible to or neglected by government in a collaborative, problem-centered way. Chapter seven examines AI-powered forms of civic tech. AI is used in this context as well for efficiency purposes: to process a vast number of comments and text published by citizens. It facilitates consulting a larger number of citizens. However, it may be difficult to explain to citizens how AI makes its decisions. In other words, it could make the outcome document suspicious, that is, reducing trust in the process and its perceived legitimacy, as well as hinder citizen participation motivation.

NOTES

1. Swiss National Science Foundation, Grant 190509, https://data.snf.ch/grants/grant/190509
2. I do not presume the existence of a specific self-conscious and homogenous social community that identifies as “sexual minority.” By using the plural “sexual minorities,” I am in effect emphasizing that individuals who belong to sexual minorities are rather divided and perceive their bodies and sexuality in many distinct ways.
3. See the website: See designjusticenetwork.org.
4. Close cooperation between these countries in the field of AI: “Declaration of cooperation on AI” adopted by all EU Member States, Norway and Switzerland on 10 April 2018, and the “Coordinated Plan on the Development and Use of Artificial Intelligence Made in Europe” adopted in December 2018, to develop joint actions for stronger and more effective collaboration between the Member States, Norway, Switzerland, and the European Commission in four main areas: boosting investment, making more data available, promoting talent, and building trust.

REFERENCES

Introduction


