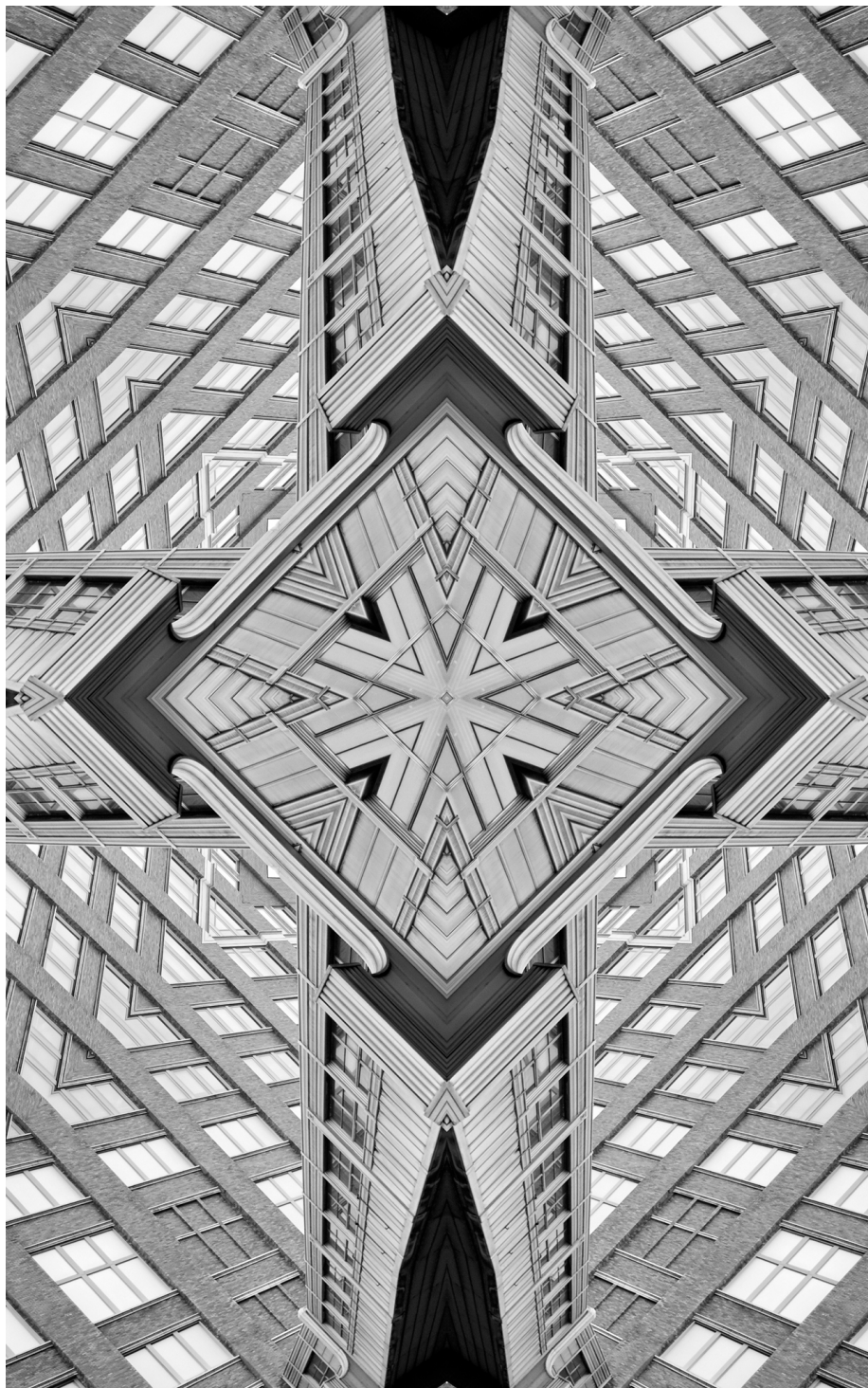


Issue

Brief

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Our Digital Age and the Exercise and Contestation of Power

Stephanie Diepeveen

Abstract

Over the last 30 years, digital innovation has been met with vacillating opinions on whether technology is emancipatory or tends to benefit those with political and/or economic power. In the context of innovations in AI in the early 2020s, this brief tackles the question: In a digital age, what is new in who exercises power over whom? It focuses on the power of States in relation to both citizens and territory, and outlines four areas where fundamental changes are taking place in the exercise and contestation of power: (i) new State dependencies on tech firms; (ii) digitalisation of citizenship; (iii) the preoccupation with the potential for total surveillance; and (iv) new concerns and claims to territorial rule.

By late 2023, it had seemed clear that the world is shifting towards a digital age, whereby information in the form of digital data underpins social, economic and political activities and decision-making. The public launch of ChatGPT a year earlier, through which artificial intelligence (AI) is shown to generate human-like conversational text, resulted in an explosion of interest in advances in the possibilities for AI to transform human activities—from the nature of work, to fraud, to geopolitical competition. While other technological innovations may still be more distant, such as the promise of quantum computing,¹ their potential future use is nonetheless becoming more imaginable.

A ‘digital age’ provokes existential concerns that digital technology might surpass human performance and control, or that Big Tech will become a ‘new leviathan’² that will challenge state sovereignty. Such a focus, however, hides the continued limitations of technological use. For instance, generative AI depends on physical infrastructure and energy for complex technological processing, which remains a barrier for many States.

There are, to begin with, conflicting views on the significance of digital change to politics and society. In 2012, David Karpf, an academic in media and communications, warned that “the glimmering promise of online data abundance too often proves to be fool’s gold.”³ Indeed, amid all the talk of a ‘digital age’, much of the world’s regions and populations remain disconnected or have limited and/or unreliable connectivity. The gap is most visible in Africa where, in 2021, only 50.6 percent of people had access to electricity and 36 percent used the internet.⁴ Meanwhile, data is being labelled as the ‘new oil’, with digital processes argued to bring unprecedented opportunities for the natural and social sciences.⁵

The opposing views are underpinned by the difficulty of predicting the future significance of technologies. After all, inventions have serendipitous life histories.⁶ While designed for specific applications and contexts, technologies tend to have meanings and applications in unanticipated contexts.⁷

When Digital Technologies Become ‘Political’

To move beyond the current opposing views, it would be helpful to consider how and why digital technologies have been conceptualised as relevant to political power. Political theorist Langdon Winner (1980) usefully differentiates between two ways that technology might be conceived as political: (i) some technologies are aligned with specific power relations by virtue of their design; and (ii) others are more flexible in how they can be used.⁸ The latter become political in their use, but do not necessarily favour one set of power relations.

Digital technologies reflect both ways of being political. By design, data-based technologies embed biases and inequalities. Data is generated through human activity and is marked by the biases and inequalities of past actions. From Safiya Noble’s analysis of search algorithms, to Virginia Eubanks’ study of algorithmic processing in social welfare provision,⁹ there is evidence that developers’ societal biases can be built into digital design and process.

Equally, inbuilt inequalities do not delimit how technologies might be used. Telecommunications infrastructure might be used to both, broadcast state power and disseminate alternative ideas of power.¹⁰ Even as social media platforms use algorithmic systems to filter and promote content, they give way to varied uses in political contestations: to spread hate speech and incite violence, confront repressive powers, and target information campaigns.

Therefore, the relationship between digital technologies and power can be viewed as being dialectical. Existing power structures inform decision-making around the production, innovation, and design of technologies. Digital technologies, in turn, become part of the infrastructure and tools through which political, social and economic life plays out. And, digital traces—data records of what people do online—input back into ongoing digital processes.

Vladimir Lenin posed the basic question of politics in his slogan, ‘who/whom’ (*kto kogo*): who exercises power over whom.¹¹ Given the dialectics of power and digital technology, answering this question in a digital age requires considering how power relations inform and are shaped through digital technologies. To this end, while acknowledging the sheer diversity and complexity of experiences in our digital age, this brief approaches the question of power in a digital age by focusing on some key tendencies and directions in how digital technologies interweave with the exercise and contestation of State power over citizens and territories. This snapshot then becomes the premise from which to address the question: In a digital age, what is new in who exercises power over whom?

States and Citizens in a Digital Age

The COVID-19 crisis accelerated the use of digital technologies by States, driven by a need to act quickly to manage the spread of the pandemic. Yet, even prior, digital technologies and data were already being integrated into citizen-State relations in critical ways—from how States recognise citizens, to the exercise of State control, to the ways that power is limited and contested.

States' recognition of citizens

The use of digitised IDs is growing globally, with at least 161 countries having embedded biometrics in their national IDs.¹² Digital identification and authentication facilitate citizens' participation in political, economic and social activities.¹³

Databases as systems to identify, classify and target citizens or subjects do not originate with a digital age; the database was already a tool of control and organisation under European colonial rule.¹⁴ With a digital age, the scale of data and complexity of analysis increases exponentially, resulting in “an unprecedented ability to combine both variety and quantity of information to a system productive of new forms of immediate legibility of populations and identification of individuals.”¹⁵

Digital exclusion from civic life

Digital identification alters the premises through which individuals are included or excluded from civic life. By making connectivity a requirement for political recognition, it also becomes a tool to deny participation in public life.¹⁶

Incidences of internet shutdowns have remained high over the past few years, with 155 documented cases in 2020.¹⁷ Government-initiated internet shutdowns are often linked to situations of potential political instability, such as protests, elections, and even national exams.^a

Surveillance through digital inclusion

While exclusion from data can equate to exclusion from civic life, the visibility of individuals *as data* enables new forms of surveillance. Rather than

a Governments have justified internet shutdowns around national exams to prevent cheating and maintain exam integrity.

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the panopticon's symbolic omniscient gaze^b instilling self-discipline among individuals, an abundance of data and automated processes brings the promise of more complete and constant surveillance, whereby States might pre-empt dissident behaviour.¹⁸

Governments and security agencies already use surveillance technologies to monitor individuals, underpinned by a lucrative commercial market. NSO Group's Pegasus spyware presents one of the most effective and controversial examples in recent history. Pegasus software enables unrestricted access to data on a mobile phone, undetected by the user. Democratic and authoritarian governments have used it to target not only individuals engaged in suspected terrorist or criminal activity, but also human rights defenders, journalists, and/or political opponents.¹⁹ While far from complete, such operation of digital surveillance over individuals suggests a shift in how power can be exercised, founded in increasingly comprehensive and constant monitoring by often unseen authorities.

The limitations of State's digital power over citizens

Any form of power is not without limitations: digitally mediated government is no exception. As states relate to citizens through digital identities, they face new forms of dependency and vulnerability.

First, there are new dependencies as a result of the infrastructure and capacities required. The capacity to innovate, produce, and operate digital technologies is often located in private firms, outside of state structures.²⁰ The degree and insecurities of government's dependence on private firms, both foreign and domestic, depends on state size, resources, and capabilities. For example, government-initiated internet shutdowns require enforcement by telecommunications companies. Competition and ownership structures can affect the ease with which shutdowns take place.²¹ In another example, WhatsApp, a messaging service, has come to play a crucial role in public life and even government communications in some countries of the Global South. This meant, for instance, that a global outage for six hours in 2021 had wide reaching effects on governments' daily functions.²²

^b The panopticon was part of social theorist Jeremy Bentham's prison reforms in the 19th century, and was discussed by philosopher Michel Foucault to illustrate power in modern society. The panopticon model includes a central watch tower that is visible to all prison inmates. The always-visible tower indicates to prisoners that they might be watched, though they cannot see when someone is actually in the tower.

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Second, citizens continue to evade and contest state power. Technologies designed for information access and exchange by nature allow for the circulation of diverse ideas. Even attempts to shut down the internet are often porous, as citizens have utilised tools such as virtual private networks and mesh networks, which maintain proximate communications.²³

Social media platforms and messaging services can provide ways for citizens to access and share information from outside of the territorial boundaries of a State, including those potentially critical of that State.²⁴ A digital public sphere can also provide new possibilities for shared identities outside of national borders. Academic in global digital cultures, Pete Chonka (2017), illustrates how individuals in the Somali diaspora have helped construct a transnational public sphere, without a clear referential territorial state.²⁵ Therefore, as digital technology reshapes the ways that States exercise power over citizens, it is also creating new opportunities for its contestation: by private firms as they are integrated into the exercise of power, and by citizens, amid a degree of uncertainty in how technologies might be used.

Territorially-based Rule in a Digital Age

From Weber's (1919) conceptualisation of the state in relation to monopoly control of the means of violence within a territory,²⁶ the idea of political power as tied to territory is core to the international system of states. Digital technologies compel a rethinking of the territorial limits of state power through (i) the introduction of virtual spaces for participating in civic life; (ii) changed demands on physical places; and (iii) opening up of new places to the possibility of human society.

The introduction of virtual spaces

Digital technologies extend the place of politics into virtual spaces. The largest global social media companies—including Meta's Instagram and Facebook, Google's YouTube, and ByteDance's TikTok—operate across national borders. These trans-national spaces are often privately owned. States retain regulatory power, but this varies depending, for example, if a firm is registered in a particular State.

Substantively, digital public spaces display characteristics distinct from physical publics in ways that make it more difficult for citizens to access reliable and open information. While lying in politics is not new,²⁷ it is becoming increasingly easy and cost-effective to produce and circulate mis/disinformation online, especially with developments in generative AI. Greater prevalence of disinformation, especially in the form of images, video and audio alongside text, makes the task of informed political judgements increasingly difficult. Alongside, digital spaces support data-based informational targeting. The use of personal data acquired from Facebook by Cambridge Analytica in the 2010s for targeted election campaigns highlighted the possibility of such use of behavioural data.²⁸

The impact of widespread disinformation and targeted influence campaigns on individuals' political behaviours and perceptions remains a complex question, especially if taking into account how people exist across on- and offline spaces. Still, the ephemeral boundaries and substantive dynamics of digital spaces pose challenges to both states and citizens: with States more vulnerable to informational influences beyond their borders, and citizens challenged in their ability to make informed decisions.

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A reassertion of the importance of territorial spaces

The dynamics of a digital public sphere imply an image of politics unconstrained by physical place. Yet, these virtual experiences are premised upon physical infrastructure and the transformation of physical landscapes. The physical realities of digital technologies have resulted in renewed concern for State control over territory and resources.

Demands on raw materials and industries place importance on specific locations of extraction and production in ways that alter international competition and local political and economic realities. The extraction of coltan in the Democratic Republic of the Congo (DRC), for example, has profoundly reshaped the local political landscape. Anthropologist James Smith (2021) shows ethnographically how mineral extraction in the Eastern DRC has given way to dense social and economic networks.²⁹ In another example, the importance of semiconductors to digital devices has made their production and supply a key point in geopolitical competition and trade, especially between the United States and China.

The physical infrastructure of data processing and digital connectivity have also renewed attention by States to control over their territories. The location of data centres, in particular, which store and deliver data for cloud computing,³⁰ have become a point of contention between visions of a digital age, with cross-border data flows and intensive data processing, and a State's attempts to retain control over citizens within territorial boundaries.³¹ States have had varying successes in pushing for data created within their territories to remain within physical borders; one example is the European Union's (EU) General Data Protection Regulation (GDPR). Still, the distributed nature of cloud computing, which facilitates complex, energy intensive data processing, sits uneasily alongside efforts for data sovereignty. Unevenness in capacity of locations to host data centres, given high energy consumption, provide an added layer to concerns about digital inequalities.³²

Access to new (physical) places

Third, renewed interest in control over territory has emerged alongside possibilities that a digital age might usher in human society beyond terrestrial limits. Jeff Bezos and Elon Musk, billionaire founders of two private space companies, have helped shift ideas of space colonisation from science fiction to possible futures.

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For some scholars, the possibility of space colonisation as part of a digital age provides an opportune break from the human injustices of colonialism on earth, given the lack of indigenous populations and the influence of contemporary ideologies.³³ Yet, discursively, the logics of space colonisation also reproduce terrestrial colonial logics. Historical colonisation transformed places into territory and claimed ownership of newly conceptualised territory. Corporations had a pivotal role to play in these processes.³⁴ In an analysis of Musk's and Bezos' discourses about space colonisation, political theorist Alina Utrata (2023) shows how they repeat prior logics of territorially-based rule.³⁵ While digital technologies challenge the tenability of territorially-based rule, territorially-based conceptions of rule persist, as states continue to negotiate control over digital and physical spaces on earth and beyond.

Our digital age presents a key moment from which to reconsider the nature, stability, and dynamism of political power.

This snapshot into some of the ways in which digital technologies are intersecting with the exercise and contestation of power across States, citizens, and territories reveals profound changes to the exercise and contestation of power in the following domains:

- **What constitutes the State:** Tech firms are interwoven into how States exercise power over citizens. This provokes new questions about dependencies of states on tech firms, and the scope of State infrastructure and operations.
- **How citizens are seen and engaged by States:** Digital data becomes a basis for identifying and authenticating individuals by States, including participation in civic life and maintenance of order. Lack of connection can also be a basis for the *de-facto* removal of citizenship rights.
- **The nature of disciplinary power:** A digital age brings a promise of constant monitoring and processing of data on individual behaviours. This indicates a potential shift to surveillance systems premised on a ‘sought-after omniscient gaze’.³⁶
- **The organisation of territory:** The physical requirements of digital technologies create new pockets of geopolitical contestation and industrial activity. Digital technologies also open up new spaces and places to claims of territorial rule.

Running through these changes have been familiar political concerns, logics and inequalities. The power of tech firms poses a reminder of previous political time periods. Even today, tech firms do not seem to rival the power afforded to company states during European colonisation whose capacities included raising taxes and waging war.³⁷ Claims to territorially-based sovereignty, even as they are challenged, persist. And, power inequalities of previous eras remain: from who has access to digital infrastructure, to who can access and process data.

This article has indicated some of the directions and tendencies in how digital technologies are reshaping and reinforcing the exercise and contestation of State power: The identity and boundaries of the State as an agent of power over

Conclusion

people and places seem to be under constant negotiation. The way in which States identify citizens and exercise power is increasingly mediated by digital data and premised on a promise of constant surveillance. The contestation of State power by citizens sits between new opportunities to participate in public life, and new forms of control tied to digital invisibility and visibility.

Our digital age has not yet escaped past actors and places of politics. States and citizens continue to exercise and contest power. Territorial rule continues to be reasserted, even as it is challenged. Instead, what is being reworked are the nature and limitations of these actors and places, thereby compelling ongoing attention to the evolution of who exercises power over whom in a digital age. [ORF](#)

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Dr. Stephanie Diepeveen is a Senior Research Fellow (Digital) at ODI and Research Associate at the Bennett Institute for Public Policy, University of Cambridge. She is author of *Searching for a New Kenya: Politics and Social Media on the Streets of Mombasa* (Cambridge University Press).

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20, Rouse Avenue Institutional Area,
New Delhi - 110 002, INDIA

Ph. : +91-11-35332000. Fax : +91-11-35332005

E-mail: contactus@orfonline.org

Website: www.orfonline.org