CHAPTER 4

Government in the Connected Era

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Abstract

Digital government is not just about putting government documents and services online; rather, it requires a public sector that understands and exists fully in a digital world, which includes understanding the reasonable limits of digital approaches and the relative merits of the analog world. The digital era has created unprecedented speed and reach for citizens accessing government services to voice their opinion about the policies behind those services. It has created ways for citizens to directly change or circumvent government programs. And, perhaps most importantly, the digital age has revealed many previously invisible voices and perspectives. This chapter will explore how Canadian governments are evolving, what digital government means for citizens, and what questions remain unanswered.

As Canadians change in response to new possibilities and pressures of a digital world, so must Canada's public institutions. At its core, the role of government is to keep citizens safe and provide for the common good through the development of policy and the provision of programs and services. The digital age raises questions

on how government fulfills these responsibilities and what responsibilities it should have in the first place.

While "digital" has a precise meaning—data expressed through a series of ones and zeros, which would be closer to the term "digitization"—it carries a set of particular meanings in a government context. In this chapter we explore this through four lenses:

1. Digital government: the modernization of government and in particular government services to citizens through the use and understanding of digital technologies and approaches.
2. Policy for the digital world: creating and revising government policies, laws, and regulations to adapt to new technologies, digitally driven trends, and impacts on citizens—that is, where technology is the subject of the issue at hand.
3. Digital democracy: using knowledge, approaches, and tools of the digital era to connect government and citizens, which could include digitally enabled collaborative or consultative policy development, the broader public-discourse environment, or direct democracy features like referenda or e-voting.
4. The state in a digital era: the digital era not only creates ways for citizens to interact differently with government, but also with each other in ways that, in many cases, circumvent the state altogether. As commerce, community, and culture increasingly transcend borders and jurisdictional authority, it challenges the authority of the state as provider for the common good.

Two caveats to start: first, these four lenses are non-exclusive. A "digital" government capable of understanding and implementing modern digital practices is more likely to be able to recommend smart and effective policy interventions, navigate digital democracy models, and understand foundational cultural shifts that could impact the role of the state. Likewise, a government that provides simple, effective services and creates meaningful opportunities for citizens to influence policy may see less people losing trust and circumventing the state. For example, tax delinquency goes down in jurisdictions with higher rates of democratic participation and when citizens feel that their government is genuinely addressing their concerns (Feld & Frey, 2002; Frey et al., 2004; Torgler, 2005).

Second, these lenses are not even necessarily digital (New Brunswick's digital strategy makes a point of noting, "This is not a technology plan") (Government of New Brunswick, n.d., para. 3). One hallmark of "digital government" is human-centred design and research, followed by continuous testing and improvement. In many cases the research involves field study, interviews, and focus groups: all long-standing and usually analog approaches. Referenda could be either analog or digital; digital approaches may just lower the cost and make frequent referenda a viable option.

There is one theme common to each thread. The societal discourse about each has moved from a sense of early skepticism based on the unknown to concern based precisely on what we do know. The proposal for Sidewalk Labs in Toronto was the target of criticism about data governance for "smart cities." Political dis- and misinformation are frequent concerns in public discourse. The once-revered Silicon Valley companies that government was told to emulate are now the subject of disillusionment and fear in the wake of data leaks and an abdication of responsibility for how people use their technology. At the Connected Canada conference, participants consistently expressed the need for equity and inclusion as fundamental principles for Canada's discourse about changing technology (Dubois & Martin-Bariteau, 2018).

Ultimately, this concern is a good thing, reflecting increasing understanding and maturity in how we're viewing the impact of a hyper-connected world on the relationship between citizens and their government. The question, however, is how effectively our public institutions pursue possible benefits while navigating costs and risks.

This chapter aims to provide a framework for understanding the relationship between public sector institutions and digital era concepts, such as those explored throughout this book, and to put forth a central argument: we are reaching a point in the connected era where both the benefits and costs to society are coming into sharper focus, replacing early overenthusiasm on one side and fear and skepticism on the other. With the role of stewardship for the public good, governments have a vested interest in this maturation, the research that reveals it, and the gaps in understanding that remain.

Digital Government

In 2017, Hillary Hartley was appointed Ontario's first chief digital officer (Hartley, 2018), while the Government of Canada launched the Canadian Digital Service. In 2018, the federal government released a set of digital standards (Government of Canada, 2019) while the Government of New Brunswick released a 5-year digital strategy (Government of New Brunswick, 2018). In 2019, Nova Scotia followed Ontario's lead and appointed a chief digital officer (The Chronicle Herald, 2019) while Ontario introduced the *Simpler, Faster, Better Services Act* to "set a new bar for digital services" (Ministry of Government and Consumer Services, 2019). Meanwhile, Quebec launched its digital transformation strategy (Lachance, 2019).

This barely scratches the surface of initiatives and investments under the banner of digital government, all of which have the potential for having real and meaningful impacts on the lives of Canadians. Yet, there remains work to be done to establish evidence of impact. Amanda Clarke (2017) noted an absence of evidence for the success of government digital units designed to reform service design, while Ines Mergel (2018) concluded the same for digital co-production (i.e., third-party actors creating value by adding to government digital infrastructure, such as open source code or open data). Paul Waller and Vishanth Weerakkody (2016) mince fewer words with their paper titled "Digital Government: Overcoming the Systemic Failure of Transformation." A common post-mortem theme across high-profile and high-value digital projects (such as transformation of the government email system, a unified Canada.ca, and the federal pay system) was that the level of complexity was greater than organizations were prepared for (Aitken, 2018).

In the meantime, the need for transformation is real. The United States Digital Services's Haley Van Dyck explained it like this in 2016:

> The [US] federal government is the largest institution in the world. It spends over 86 billion dollars a year—86 billion—on federal IT projects. For context: that is more than the entire venture capital industry spends annually—on everything. Now, the problem here is that we the taxpayers are not getting what we pay for, because 94 percent of federal IT projects are over budget or behind schedule … 40 percent of those never end up seeing the light of day. They are completely scrapped or abandoned.

The United States is not alone in that experience, and so governments are investing in digital. "Digital government" is a broad and amorphous term used to describe the current period of modernization for government with a focus on the changing role of technology. The ideological history behind the term helps frame the connection to citizens' lives and what the differences are now, and the standard in the literature is Karen Layne and Jungwoo Lee's four-stage model (2001).

In this model, early e-government efforts (late 1990s, early 2000s) were about *cataloguing*: listing government resources and services online and how they could be accessed (which was rarely online itself). Then we moved into *transaction*, which was about creating online options (e.g., updating accounts, using email channels for inquiries, and submitting forms online). The third stage was *vertical integration*, centred on sharing data and connecting similar functions—initial forays into piecemeal user-centred simplicity. The fourth stage is described by Layne and Lee as *horizontal integration*, which other authors have variously renamed *transformation* or *contextualization.* At this stage, government is reorganizing its own structures to make policies—and the visible front-office services that connect people to them—coherent and seamless to people. An example would be connecting two data systems so that people don't have to update their address to multiple departments. The integration phases reflect the growing realization, from data and experience, that simply digitizing paper processes is an incredibly limited lens.

Going digital, as opposed to "digitizing," has a more holistic, life-cycle model. Here's a hypothetical case:

1. A form is available online;
2. People's interactions with the form create a data stream about how it's working in real life;
3. This leads to user research and testing, which might be online or in person;
4. The form is subsequently redesigned, with small changes and tests occurring over time;
5. The research and data highlight problems with the underlying policy, so the policy people work with the service designers to rewrite the policy;
6. A revised policy is also tested in beta with real users;

7. To support changes over time and to support policy-service partnerships, governance strategy shifts to become more iterative, collaborative, and delivery-oriented.

Ultimately, the organization redesigns itself to support delivery in this way. In what now seems prescient for a 2001 book, Jane E. Fountain was one of the first to use the term "digital government" instead of "E-government": "The government then turned to the task of building digital government, in part through the strategy of creating virtual agencies. The virtual agency, following the web portal model used in the economy, is organized by client. … A [virtual state] is a government that is organized increasingly in terms of virtual agencies, cross-agency and public-private networks whose structure and capacity depend on the Internet and web" (p. 4). The inclusion of the words "organized by client" foreshadows the modern mantra of "user-centred design" in digital services units and the "Users First" stickers adorning the laptops of government technologists.

One of the results of this shift to digital is that it is data-rich: we know more about the world and the people in it, in a more granular and personal way. Which brings us to a theme that is prevalent across the four lenses of this chapter and is crucial for understanding government's roles in a changing Canada: with maturity comes complexity. It's easy to make bad web or mobile services that still work for some people. Digital maturity, however, includes effective data streams on who is using these services and where people are struggling or abandoning tasks altogether. It includes in-depth research into people's needs that reveal the work required to optimize the uptake of services across demographic and cultural lines, if the equity emphasized by the Connected Canada conference participants is indeed the goal (Dubois & Martin-Bariteau, 2018).

A digitally mature organization is characterized by a commitment to outcomes, fuelled by direct engagement with users and systematic review of the data about how services are being used. In the public sector context, mechanisms for public accountability can create pressure for improvements. For example, if a digital service is systematically hard to access for some Canadians more than others because hard-to-understand language or other issues of accessibility, the data would be there to make the issue known.

This leads us to the evolution referenced in this chapter's introduction. Appealing to another early e-government model, Keng Siau

and Yuan Long (2005) described the evolution beyond *transaction* into the *transformation* stage, analogous to our *integration* or *maturity* stage, and pointed to why the change required now is different and more challenging than in times past. The first two stages were simply changes in technology, automating different processes to provide information online, and then interaction. The work left to be done to truly organize government services around citizens' needs are not *technology* leaps, but rather *cultural* and *political* shifts. Meaning that what worked to get governments through the first phases of modernization won't work for the next ones.

To compound this, the next phase of digital government reflects an increasing recognition of governments' limits in realizing this vision. No matter how effective and optimized government can make a service interaction, there are still people on the other side of the equation. Some have visual or physical disabilities (temporary or permanent), differing language backgrounds, limited access to smartphones or computers, and varying levels of trust and comfort in interacting with government or via the Internet (e.g., sending personal financial information online). Ipsos put 23.5 percent of Canadians in the "low" and "very-low" digital participation categories (e.g., only 5 percent of people in the "very low" category choose to use government services online all or most of the time, as compared to 37 percent of the "high" category) (Ipsos Public Affairs, 2016).

Canada's reassuring figure that more than 90 percent of the country has access to broadband actually drops to around 60 percent to 65 percent when we look at the lowest quartile for income, or the highest quartile for age (Statistics Canada, 2012; this is in line with additional and more recent Statista [2019] findings). Increasingly, government's efforts toward digital services start to blend into digital policy questions, where programs for Internet access and digital skills start becoming part of the equation, such as Ontario's digital inclusion initiative: "In a digitally inclusive Ontario, all people can access and benefit from digital technologies in their lives—regardless of skill, ability, location or socio-economic situation. Closing digital divides and achieving digital inclusion is an obligation of people-centred organizations as we become more digitized and design with our users in mind" (Government of Ontario, 2018, p. 15).

Where other works paint a portrait of plausible futures for digital government in Canada (e.g., Olivia Neal's chapter on digital transformation in Benay, 2018), this section centred instead on

the relationship between citizens and digital government. I argue that increased attention on access and ability issues is the natural expansion of the principle of user-centred design, leading to another, deeper layer of government redesign to support the goals of digital government. The advantage of attention on the wider digital access and digital ability spectrum across Canada is twofold: (1) it will help fill the skills gaps among public servants, which likewise hamper digital government initiatives, and (2) it will equally support many governments' stated digital policy goals that rely on digitally literate and innovative public, private, social, and academic sectors.

Policy for the Digital World

Governments hear calls to take action on emerging technologies, whether it's regulating use, relaxing regulations, or supporting research and development. There are calls to involve citizens in policy development and decision-making using digital technology, and to make government operations open and transparent to citizens (Canadian Open Government Civil Society Network, 2016). In the case of a cross-cutting technology like artificial intelligence (AI), this may happen all at once across government accountabilities. For instance, at the federal level alone, one department introduced a program to accelerate AI research (Innovation, Science and Economic Development [ISED], 2018), another introduced research and guidelines on its use by government (TBS, 2019) and took steps to brace the labour market for impacts (Employment and Social Development Canada, 2019) as academics and observers warned of job loss or changes to skills required (Organisation for Economic Co-operation and Development, 2016; Bakhshi et al., 2017; Frey & Osborne, 2013). In parallel, the government created a standing advisory committee on AI, recognizing that the field and its impact on society will continuously change (ISED, 2019).

And that's just for one area of technology, albeit one that serves as a foundation to widespread change across the digital landscape. A 2018 article by Iain Klugman and the former head of the federal public service, Kevin Lynch, is a representative overview of the public discourse around the digital challenges facing governments:

> It wasn't so long ago that the fourth industrial revolution—marked by breakthroughs in areas such as robotics, artificial

> intelligence, quantum computing, the Internet of Things and nanotechnology—heralded the promise of a new paradigm, a rewired, freer, more open society.
>
> In the past year that narrative has been subsumed by one best described as disturbing, even sinister.
>
> Fake news. Robots that will put humans out of work, or worse, take over. Chronic gender and race issues at tech firms large and small. Enormous pools of capital and influence controlled by a handful of ever-larger technology firms. Data misused and privacy breached, capped by the recent revelations surrounding Cambridge Analytica and Facebook. (paras. 1–3)

Our world is rife with powerful technologies that emerge quickly. They have their conveniences and benefits but soon reveal their downsides and frightening plausible futures. This is not new, though: if this is the "fourth industrial revolution," then that means society has already weathered three. What is different this time?

The most common explanation is the pace of change for the development and adoption of technology. Mark Saner makes the case that the window between technological emergence and widespread use has become too short for governments to react—that they go from an information deficit where there isn't sufficient understanding to a power deficit where companies or people are too invested in a technology's benefit for government to intervene (2018). Vincent Mosco, reflecting on his 2005 book chronicling media technology over the century (from telegraph through to telephone, radio, and television), described how the government reaction to the current media landscape represents a discontinuity. He posited that FAMGA—Facebook, Apple, Microsoft, Google, and Amazon—has too much power over public discourse for government to meaningfully intervene now: "This is the first time in history we've largely set aside the public utility debate" (Mosco, 2004; Aitken, 2018). The 2001 *United States v. Microsoft Corp.* antitrust case, about whether it was an unfair monopoly to bundle Internet Explorer with Windows, now seem quaint in comparison.

The information deficit is not an easy one to overcome. Sixty percent of Canadians believe that "law and government policies are not keeping pace with the changes in technology" (Ipsos Canada, 2018a). A former congressional staffer reflected on the work the US Congress did on Internet regulation a few years ago, noting that

between the 80 members of Congress and their staff working on this file, only a handful had a technology background: "I didn't feel like I had people or expertise to make informed decisions. To be frank, I was [going home after work and] asking my friend at Google for advice. That's not okay! Decent government in the twenty-first century requires this expertise in-house … every issue is going to be a tech issue" (quoted in Aitken, 2018, p. 57).

In lockstep, we are gaining a better understanding of the impacts of technology, and many Canadians are wary. "There is some very real technology fatigue and some people (especially older Canadians) are struggling to keep up with the pace of change," writes Ipsos Canada President Mike Colledge (Ipsos Canada, 2018a, p. 3). While 81 percent of Canadians think technology will have a very positive or somewhat positive impact on large businesses, only 64 percent think the same for small businesses. And the outlook is bleaker for new immigrants (41 percent), Indigenous Peoples (35 percent), older Canadians (30 percent), and low-income Canadians (29 percent) (Ipsos Canada, 2018b). This mirrors the reality of the digital government lens, where challenges in access and use for government services tend to be concentrated among already marginalized populations (Public Policy Forum, 2018).

Digital Democracy

In the last few years, the Government of Canada has run an unprecedented number of public engagement exercises, ranging from how to roll out an innovation fund to the process for legalizing cannabis (Government of Canada, 2020), to whether peach tree borer pheromones are an acceptable pesticide to deter moths by throwing off their mating (Government of Canada, 2018). This enthusiasm builds on a long foundation of analog engagement through such means as roundtables, focus groups, and Canada Post. Since 1986, every proposed change of a federal regulation has to be announced in the *Canada Gazette*—the official "newspaper" of the Government of Canada—and opened for comment from stakeholders. In parallel, for years, government analysts produced green papers and white papers about policy analyses to circulate to interested communities.

The digital age changes this environment in a few ways. Mass communications technologies lend themselves to scale and reach and can lower the cost of public engagement. At the same time, citizens,

led by civic organizations, called for increased engagement, and the existence of the Internet removed any excuse to not have this. Accordingly, we saw a steep rise in online public engagement processes while learning the drawbacks and limitations.

The early days of the Internet were also characterized by lofty visions for its potential to reshape democracy, empower citizens, and create a national—or worldwide—civic dialogue about the future we all wanted. *New York Times* bestsellers proclaimed that mass collaboration would "change everything" (Tapscott, 2008). In today's world of bitcoin-enabled ransomware and AI-enabled deepfakes of videos that make it hard to distinguish the actual person from a computerized manipulation of them, we are more likely to hear the musing that "Maybe the Internet Isn't a Fantastic Tool for Democracy After All" (Read, 2016).

This period follows the typical pattern of overenthusiasm for technological advances, and governments experimented with online engagement past the point of diminishing marginal returns. Over time, practitioners learned that raw input and mass volumes of comments were often less useful for government and less satisfying for citizens than smaller-scale in-depth dialogue (Gregory, 2017). People and organizations, both malicious and well meaning, began flooding such processes with input to give a sense of a public consensus, often using automated bots. Governments learned that the idea of "conversation" doesn't scale well; most online discussion forums cap out at approximately 250 participants, and the largest-scale online engagement platform, pol.is, can reach over 10,000 people by focusing people's attention on binary preference votes (Horton, 2018). Planners paid attention as the federal government's electoral reform engagement was marked by widespread criticism. So, it's perhaps not surprising that when the federal government launched a nationwide dialogue on "Canada's energy future," they chose a demographically representative group of Canadians to deliberate at length and simply report back to the country (Simon Fraser University, 2017). Other programs solicit input at scale through the more established means of syndicated public opinion research.

While government increasingly exists and operates in a digital space, so too do citizens. Through social media, blogs, and discussion forums, Canadians have a plethora of options to engage in civic discourse. In 2017 when the Government of Canada invited comments on Canada's tax policy for small businesses (Department

of Finance, 2017), the #cdnpoli community on Twitter crowdsourced and collaborated on data and analysis, which eventually made its way into op-eds and formal responses. In the world of government citizen engagement, it is easy to forget "that communities and individuals have power of their own that is not conferred on them by the decision-maker" (McCallum, 2015).

Two patterns from previous sections repeat. One, we see the deeper pattern around issues of inclusion. Although the Internet was touted as the ultimate leveller of the playing field, where intelligence and ideas would command authority rather than position, we can often find sexism, racism, hate speech, bullying, and abuse driving people from public discourse.

Two, we see the broader pattern of maturity leading to dampened enthusiasm in comparison to the once lofty vision for digital democracy. But this dampened enthusiasm ultimately can lead to more productive uses of technology, in which digital means are truly the best way to connect citizens and their governments.

The State in a Digital Era

"I predict the Internet will soon go spectacularly supernova and in 1996 catastrophically collapse," Robert Metcalfe wrote in a column in 1995, two years before he blended that piece of paper into a smoothie and consumed it at the World Wide Web Conference to literally eat his words (Strohmeyer, 2008, para. 16).

In the early days of the now quarter-century-old Internet, people frequently viewed the online world as something that was fleeting, incomplete, and elsewhere. Academics asked questions like "can the Internet be used to mobilize social movements?," and one social media leader warned that "you have to realize that what you do online has impacts in the real world" (quoted in Aitken, 2018, p. 13). Culturally, we're moving away from these mental patterns and the "the idea of the virtual … has since receded into the background" (Hui, 2016). Steffen Christensen, an expert in AI and foresight at Policy Horizons Canada, says that "the Internet is no longer a place. It is us. It *is* the world. We live in it" (quoted in Aitken, 2018, p. 13).

Making deliberate choices between digital and analogue methods is a sign of maturity for the era of the Internet, where we no longer go digital because it's interesting or because we can, but instead pick what best serves our needs and goals. At the edges of

this definition are the existential questions for government. If that which is digital is real, and people can access real services, products, communities, and security, then the logic of citizenship and jurisdiction bounded by physical lines starts to erode.

When Lincoln Dahlberg (2011) constructs a range of models for digital democracy, some bear a resemblance to that initial optimism and others, to the dark side that proponents may have overlooked. He describes the ability for people to be individually empowered in seeking political information and engaging in political life (he calls these people *liberal consumers*) and describes the ability to dialogue with others toward consensus (he calls this *deliberative*—the once-presumed end state). However, the Internet also creates additional options for mobilization against the state for both better and worse (these actors he terms *counter-publics*), and for a fourth model to exist, whereby people self-organize not to interact with the state but to circumvent it entirely (these he calls *autonomous Marxists*).

This self-organization has become mainstream in our lives via peer-to-peer accommodations platforms like HomeAway and Airbnb,[1] digital file-sharing platforms starting with Napster, and online marketplaces like Craigslist and Kijiji. Statistics Canada (2017) reported that from November 2015 to October 2016 an estimated 9.5 percent of people (2.7 million) aged 18 and older living in Canada participated in the sharing economy by using peer-to-peer ride services or private accommodation services, spending $1.31 billion. This is a subsection of what the Canada Revenue Agency terms the "underground economy" of about $45.6 billion (2018). This, depending on your ideology, does contain downsides: it creates a tax gap of $8.7 billion (Canada Revenue Agency, 2018) less for spending on public infrastructure and services. Similarly, though people might have saved money on weekend trips by using peer-to-peer accommodations instead of hotels, we now are seeing that these markets are "having rather large impacts on our housing markets" and driving up rental and house prices and hurting younger people and first-time homebuyers (Wachsmuth & Weisler, 2018). A co-author of that research seems to align his thinking with Saner's on the opportunity gap for governments intervening on emerging trends: "'Airbnb, HomeAway and other companies in the sector enjoyed a period of several years where policy-makers weren't really paying attention,' [Wachsmuth] said. 'I think that period is over now'" (quoted in Cardoso & Lundy, 2018, para. 38).

But in many ways, the underground and peer-to-peer economy also means a boundaryless space defined by interests and markets as much as geographic jurisdictions. The transaction pattern and enabling technology are much the same whether you're renting a room from a neighbour or interacting with international corporations, communities across the globe, or malicious actors operating for personal profit or political mischief. Governments have a much more difficult time defining and enforcing their responsibilities without borders to create delineation. On the most benign end of the spectrum, it's renting out rooms. At the most virtuous, it's government working with civil society to map non-government, community services that newcomers to Canada can draw on via Ajah's SectorLandscape tool (Ajah, 2020). At the worst, the Internet can equally be used as a tool for political misinformation, bullying, identity theft, phishing, ransom, and immigration and human trafficking scams. The question is, to what extent are governments responsible for protecting citizens from their own decisions to work outside the system?

Governments have to increasingly get used to actors and actions that are beyond their jurisdiction and beyond their control—but that have real and tangible impacts on Canadian citizens and soil, and moving at the speed of information of 300,000 km/s.

Conclusion: The Future of Government in a Connected World

In this chapter, we have explored four lenses through which to look at government's role in a digital era:

1. As a service provider going through modernization to meet rising expectations, captured by the term *digital government*;
2. As a governance body adapting to increasingly rapid changes that do (or should) impact *policy for the digital world*;
3. As an aggregator of the public interest where democratic relationships are increasingly conducted online—a *digital democracy*;
4. As an entity threated by changing cultural and geopolitical forces that many say threaten the relevance of *the State in a digital era*.

Through each lens, we have seen how the promise of the Internet era has been challenged by setbacks, unforeseen negative consequences,

rising expectations, and (if nothing else) a challenge in establishing an evidence base for the impacts on society. The need for timely and responsive research to support those governing or observing the changing world from a public good perspective has never been greater, and can only increase from here.

The research agenda presented throughout this book is, in many ways, also the research agenda required to respond to the trends described throughout this chapter, particularly through the lens of *policy for the digital world*.

There is a need to establish, in lockstep, a firmer understanding of the impacts and success factors for different approaches to digital government, as per the gaps described by Amanda Clarke (2017), Ines Mergel (in Mergel, Kattel, Lember, and McBride [2018]), and Paul Waller and Vishanth Weerakkody (2016). This work would benefit from a closer ongoing relationship between governments and the academic community, and more proactive engagement from governments on research interests. Specifically, governments should identify forward-looking priorities and use existing granting mechanisms to support the academic community in building theoretical and evidence bases for emerging questions. The government policy community should also increasingly consider governance and the digital sphere as fields requiring analytical rigour, engaging with the available literature and building program-to-expert relationships with Canada's leading scholars.

While many authors have explored the intersections of trust, digital government, and digital democracy (Mahmood et al., 2014; Mahmood, 2018; Tolbert & Mossberger, 2006), firm conclusions have been few and far between. Digital government discourse lacks solid foundations, as Clarke describes in Chapter 5 of this volume on digital government and data governance.

More important than the research agenda, however, is the structure that supports governments and academics working together to identify and adjust research programming to support emerging understandings and promising initial findings. The Connected Canada conference and subsequent works are one model for collaborative issue exploration and agenda setting; developing additional avenues will be crucial to Canada's maturation as a connected country.

Note

1. It's odd the extent to which Airbnb has captured the attention of people writing about digital disruption, given that HomeAway has been doing the exact same thing, albeit for a more niche market, for over 20 years.

References

Aitken, K. (2018, September). *Governance in the digital age*. Public Policy Forum. https://ppforum.ca/publications/governance-in-the-digital-age/

Ajah (2020). *Sector Landscape*. http://landscape.ajah.ca/?limit=100&source=&page=1&search=&name=&sort=&city=&province=&date_from=0&date_to=0&instance_slug=

Bakhshi, H., Downing, J. M., Osborne, M. A., & Schneider, P. (2017). *The future of skills: Employment in 2030*. Pearson.

Benay, A. (2018). *Government digital: The quest to regain public trust*. Dundurn.

Canada Revenue Agency. (2018). *Underground economy strategy 2018–2021*. Government of Canada. Retrieved August 1, 2019, from https://www.canada.ca/en/revenue-agency/programs/about-canada-revenue-agency-cra/corporate-reports-information/underground-economy-strategy-2018-2021.html

Canadian Open Government Civil Society Network. (2016). *About The Canadian Open Government Civil Society Network*. https://www.opengovdialogue.ca/about.html

Cardoso, T., & Lundy, M. (2019, June 20). Airbnb likely removed 31,000 homes from Canada's rental market, study finds. *The Globe and Mail*. https://www.theglobeandmail.com/canada/article-airbnb-likely-removed-31000-homes-from-canadas-rental-market-study/

Clarke, A. (2017). Digital government units: Origins, orthodoxy and critical considerations for public management theory and practice. http://dx.doi.org/10.2139/ssrn.3001188

Dahlberg, L. (2011). Re-constructing digital democracy: An outline of four "positions." *New Media & Society, 13*(6), 855–872.

Department of Finance. (2017). *Tax Planning Using Private Corporations*. Retrieved June 26, 2020 from https://www.canada.ca/en/department-finance/programs/consultations/2017/tax-planning-using-private-corporations.html

Dubois, E., & Martin-Bariteau, F. (2018). *Canadians in a digital context: A research agenda for a connected Canada*. http://dx.doi.org/10.2139/ssrn.3301352

Employment and Social Development Canada. (2019, February 14). *Government of Canada takes action to ensure Canadian workers are prepared for the jobs of tomorrow* [Press release]. https://www.canada.ca/

en/employment-social-development/news/2019/02/government-of-canada-takes-action-to-ensure-canadian-workers-are-prepared-for-the-jobs-of-tomorrow.html

Feld, L. P., & Frey, B. S. (2002). Trust breeds trust: How taxpayers are treated. *Economics of Governance*, *3*(2), 87–99.

Fountain, J. E. (2001). *Building the virtual state: Information technology and institutional change*. Brookings Institution Press.

Frey, B. S., Benz, M., & Stutzer, A. (2004). Introducing procedural utility: Not only what, but also how matters. *Journal of Institutional and Theoretical Economics (JITE), 160*(3), 377–401.

Frey, C. B., & Osborne, M. (2013, September 17). *The future of employment: How susceptible are jobs to computerisation?* [Working paper]. Oxford Martin Programme on Technology and Employment.

Government of Canada. (2018). *Consultation on (Z, Z)-3,13-octadecadien-1-yl acetate and its associated end-use products, proposed re-evaluation decision PRVD2018-07.* Retrieved on December 19, 2019, from https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management/public/consultations/proposed-re-evaluation-decisions/2018/octadecadien.html

Government of Canada. (2020). *Consulting with Canadians*. Retrieved June 26, 2020 from https://www.canada.ca/en/government/system/consultations/consultingcanadians.html

Government of Canada. (2019). *Government of Canada Digital Standards*. https://www.canada.ca/en/government/system/digital-government/government-canada-digital-standards.html

Government of New Brunswick. (n.d.). *Digital New Brunswick.* https://www2.gnb.ca/content/gnb/en/corporate/promo/dnb.html

Government of New Brunswick. (2018, April 27). *Digital strategy envisions redesigned government services* [News release]. https://www2.gnb.ca/content/gnb/en/news/news_release.2018.04.0449.html

Government of Ontario. (2018, March 20). *Start with users. Deliver together.* Retrieved January 20, 2020, from https://www.ontario.ca/document/start-users-deliver-together/sparking-new-vision

Gregory, R. S. (2017). The troubling logic of inclusivity in environmental consultations. *Science, Technology, & Human Values*, *42*(1), 144–165.

Hartley, H. (2018, April 23). *One year in: A retrospective*. Medium. https://medium.com/ontariodigital/one-year-in-a-retrospective-30600f7f3efc

Horton, C. (2018, August 21). *The simple but ingenious system Taiwan uses to crowdsource its laws*. MIT Technology Review. https://www.technologyreview.com/2018/08/21/240284/the-simple-but-ingenious-system-taiwan-uses-to-crowdsource-its-laws/

Hui, Y. (2016). *On the existence of digital objects.* University of Minnesota Press.

Innovation, Science and Economic Development Canada [ISED]. (2018, February 15). *Government of Canada's new innovation program expected to create tens of thousands of middle-class jobs* [Press release]. https://www.canada.ca/en/innovation-science-economic-development/news/2018/02/government_of_canadasnewinnovationprogramexpectedtocreatetensoft.html

Innovation, Science and Economic Development Canada [ISED]. (2019, May 14). *Government of Canada creates advisory council on artificial intelligence* [Press release]. https://www.newswire.ca/news-releases/government-of-canada-creates-advisory-council-on-artificial-intelligence-838598005.html

Ipsos Canada. (2018a). *Tech for Good: A Canadian Perspective* [Survey]. https://canadianinnovationspace.ca/wp-content/uploads/2018/05/IpsosCanadaNext_TrueNorth_May22.pdf

Ipsos Canada. (2018b). *CanadaNext*. https://www.ipsos.com/en-ca/knowledge/society/CanadaNext-2018

Ipsos Public Affairs. (2016). *Public perspectives: Participation in the digital economy 2.0*. https://www.ipsos.com/sites/default/files/publication/2015-12/7086-report-2.0.pdf

Lachance, N. (2019, June 3). *Le gouvernement entame une vaste transformation numérique*. Le Journal du Québec. https://www.journaldequebec.com/2019/06/03/le-gouvernement-entame-un-vaste-tournant-numerique

Layne, K., & Lee, J. (2001). Developing fully functional e-government: A four-stage model. *Government Information Quarterly*, *18*(2), 122–136.

Klugman, I., & Lynch, K. (2018, April 27). It's time for technology to deliver on its promise to make lives better. *The Globe and Mail*. https://www.theglobeandmail.com/business/commentary/article-its-time-for-technology-to-deliver-on-its-promise-to-make-lives

Mahmood, M. (2018). *Does digital transformation of government lead to enhanced citizens' trust and confidence in government?* Springer.

Mahmood, M., Osmani, M., & Sivarajah, U. (2014). *The role of trust in e-government adoption: A systematic literature review*. Brunel University London.

McCallum, S. R. (2015, March 12). *Re-imagining the IAP2 spectrum*. Medium. https://medium.com/@RedheadSteph/re-imagining-the-iap2-spectrum-9d24afdc1b2e

Mergel, I., Kattel, R., Lember, V., & McBride, K. (2018). Citizen-oriented digital transformation in the public sector. *Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age*. Association for Computing Machinery. https://dl.acm.org/doi/10.1145/3209281.3209294

Ministry of Government and Consumer Services. (2019, April 30). *Ontario delivers simpler, faster, better services for Ontarians with new digital plan* [Press release]. https://news.ontario.ca/mgs/en/2019/04/

ontario-delivers-simpler-faster-better-services-for-ontarians-with-new-digital-plan.html

Mosco, V. (2005). *The digital sublime: Myth, power, and cyberspace*. MIT Press.

Organisation for Economic Co-operation and Development. (2016). *Automation and independent work in a digital economy: Policy brief on the future of work*. https://www.oecd.org/employment/Policy%20brief%20-%20Automation%20and%20Independent%20Work%20in%20a%20Digital%20Economy.pdf

Public Policy Forum. (2018). *Ontario digital inclusion summit: Summary report*. https://ppforum.ca/wp-content/uploads/2018/05/PPF-Report-Ontario-Digital-Inclusion-Summit-English-May-2018.pdf

Read, M. (2016, November 27). Maybe the Internet isn't a fantastic tool for democracy after all. *New York Magazine—Intelligencer*. http://nymag.com/intelligencer/2016/11/maybe-the-internet-isnt-a-tool-for-democracy-after-all.html

Saner, M. (2018, April 16). *The trouble with emerging technologies (Solutions to the Collingridge dilemma)* [PDF slides]. Carleton University. https://carleton.ca/rgi/wp-content/uploads/CC2018_Trouble-With-Emerging-Technologies_Saner.pdf

Siau, K., & Long, Y. (2005). Synthesizing e-government stage models—a meta-synthesis based on meta-ethnography approach. *Industrial Management & Data Systems*, *105*(4), 443–458.

Simon Fraser University, Morris J. Worsk Centre for Dialogue. (2017, July 27). *The citizen dialogues on Canada's energy future*. https://www.sfu.ca/dialogue/news-and-events/archives/2017/the-citizen-dialogues-on-canadas-energy-futureo.html

Statista. (2019). *Internet usage penetration in Canada from 2013 to 2019, by age*. https://www.statista.com/statistics/373955/canada-online-penetration-age/

Statistics Canada. (2012). *Canadian Internet Use Survey, 2012*. https://www150.statcan.gc.ca/n1/daily-quotidien/131126/dq131126d-eng.htm

Statistics Canada. (2017). *The sharing economy in Canada*. https://www150.statcan.gc.ca/n1/daily-quotidien/170228/dq170228b-eng.htm

Strohmeyer, R. (2008, December 31). *The 7 worst tech predictions of all time*. PC World. https://www.pcworld.com/article/155984/worst_tech_predictions.html

Tapscott, D., & Williams, A. D. (2008). *Wikinomics: How mass collaboration changes everything*. Penguin.

The Chronicle Herald. (2019, May 30). *Nova Scotia shuffles deputy ministers, replaces top health bureaucrat*. https://www.thechronicleherald.ca/news/local/nova-scotia-shuffles-deputy-ministers-replaces-top-health-bureaucrat-316885/

Tolbert, C. J., & Mossberger, K. (2006). The effects of e-government on trust and confidence in government. *Public Administration Review, 66*(3), 354–369.

Torgler, B. (2005). Tax morale and direct democracy. *European Journal of Political Economy, 21*(2), 525–531.

Treasury Board of Canada Secretariat [TBS]. (2019). *Ensuring responsible use of artificial intelligence to improve government services for Canadians* [News release]. https://www.canada.ca/en/treasury-board-secretariat/news/2019/03/ensuring-responsible-use-of-artificial-intelligence-to-improve-government-services-for-canadians.html

United States v. Microsoft Corporation, 253 F.3d 34 (D.C. Cir 2001).

Van Dyck, H. (2016). *How a start-up in the White House is changing business as usual.* https://www.ted.com/talks/haley_van_dyck_how_a_start_up_in_the_white_house_is_changing_business_as_usual

Wachsmuth, D., & Weisler, A. (2018). Airbnb and the rent gap: Gentrification through the sharing economy. *Environment and Planning A: Economy and Space, 50*(6), 1147–1170.

Waller, P., & Weerakkody, V. (2016). *Digital government: Overcoming the systemic failure of transformation.* Working Paper 2, Brunel University London. http://dx.doi.org/10.2139/ssrn.2803233