CHAPTER 5

Data Governance: The Next Frontier of Digital Government Research and Practice

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Abstract

Picking up on a global orthodoxy calling for digital government transformation, governments across Canada are now introducing ambitious service reforms and broader changes to the organization and culture of public service institutions. These reforms are primarily justified on the grounds that they are necessary if governments wish to meet the expectations of citizens accustomed to the innovative digital service offerings of the private sector. Yet with digital transformation agendas come notable changes to the ways that public sector data is collected, applied, and shared across the state and among private firms. These data governance reforms may prove unacceptable to citizens should they lead to privacy breaches, betray principles of equity, transparency and procedural fairness, and loosen democratic controls over public spaces and services. This chapter presents three cases that illustrate the data governance dilemmas accompanying contemporary digital government reforms. The chapter next outlines a research and policy agenda that will illuminate and help resolve these dilemmas moving forward, with a view to ensuring that digital era public management reforms bolster, rather than erode, Canadians' already precarious levels of trust in government.

For the past decade, digital government research and practice have focused on the institutional and cultural reforms required to build more data-driven, user-focused, open, and entrepreneurial public sector institutions. This new orthodoxy has become widely accepted as the only means by which government can meet citizens' expectations for services—an imperative framed as essential to preserving the state's legitimacy in the digital age.

Inspired by this call to action, governments are investing in new types of data collection, sharing, and use. These efforts bring to light a series of complex data governance challenges that have, to date, largely been overlooked in the quest for digital government transformation. These challenges relate less to the managerial and institutional reform questions that occupied early digital government work and instead speak to complex ethical questions on the principles and values that should inform data collection, use, and sharing in the public sector and within the ecosystem of private actors implicated in public service delivery.

This chapter begins by outlining the digital government orthodoxy that has captured the attention of governments in Canada and globally in the past decade. Next, three recent examples of digital government reforms are explored in order to underscore the data governance dilemmas that accompany the new digital government orthodoxy. The chapter concludes with three recommendations to guide a new policy and research agenda on data governance, in order to inspire immediate and widespread attention to this overlooked but critical challenge to democratic governance in Canada.

Digital Era Public Management Reform: The Existing Research Landscape

Since the mid-2000s, governments and academics have advanced a remarkably consistent vision of digital era public management reform (Clarke, 2017; Dunleavy et al., 2006; Mergel, 2017; Mergel et al., 2019; O'Reilly, 2011). This common orthodoxy asserts that in order for civil service institutions to be resilient, effective, and relevant in a digital context, they must initiate radical reforms to their institutional structures, their cultures, and their policy and legal regimes. This orthodoxy can be summarized by its six central tenets, which dictate that digital era governments should:

1. Be horizontal and "joined up" such that policies, programs, and services are conceived and managed through so-called platform models that cut across or dissolve departmental and functional silos;
2. Enable greater discretion and entrepreneurialism throughout the civil service by streamlining and reducing hierarchical oversight and approval processes, and challenging a status quo-oriented/risk-averse managerial culture;
3. Invest in digital skills (e.g., design, user research, data science, and product management) within the civil service, and better integrate those with these skills into all policy and program design and management, as well as at the highest levels of bureaucratic decision-making;
4. Be open—defined broadly and in some cases nebulously, and covering a range of activities, including the release of government data (open data); citizen consultation and stakeholder engagement; a transparent and informal culture of government communications (especially via social media); and a willingness to engage private actors in public service delivery;
5. Treat data as a high-value public asset, enabling sophisticated data-driven decision-making across all government functions;
6. Adopt the tenets of design thinking, especially through iterative, agile service design practices that prioritize user experience as a primary input in the development of policies, programs, and services.

These prescriptions are not strictly new.[1] However, they are now invoked with a greater sense of urgency. In some cases, these reforms are justified on the grounds that they will generate much-needed cost savings and administrative efficiencies. But most commonly, digital government reforms are framed as essential given advances in the private sector's online service offerings. Here, the argument goes that, as citizens access information and as they complete transactions online with relative ease in their private lives, they become ever more disenchanted with government, whose services are presumed to be clunkier, slower, and less digital friendly than those on offer from the Amazons and Googles of the world. Absent the reforms listed above,

governments are, as the orthodoxy goes, doomed to lose citizen trust and, in turn, the democratic licence to govern.

This preoccupation with citizens' service expectations is reflected in a definition, now widely adopted, of "digital" offered by the former UK Government Digital Service leader, Tom Loosemore. Writing in 2016 on Twitter, he defined "digital" as the act of "applying the culture, practices, processes and technologies of the Internet-era to respond to people's *raised expectations*" (Loosemore, 2016, emphasis added). Loosemore's perspective was reflected in a 2019 study that probed the views of digital government experts, both from within and outside of the public sector, on the drivers of digital government reforms. These experts agreed that because "citizens, businesses, and politicians experience the technological change in their environment, life, and work, [they] expect public administrations to adapt accordingly and to provide similar technology in their public service delivery" (Mergel et al., 2019, p. 2). Echoing this view, Canada's first Minister of Digital Government explained in 2018 that "we can't be a Blockbuster government serving a Netflix citizenry" (Brison, 2018, para. 23).

With this orthodoxy so firmly settled, the bulk of the existing research on digital government has focused not on how governments should be reimagined for a digital age—on the target and goals of reform—but rather on the means by which governments can adapt to become more horizontal, entrepreneurial, data-driven, and user-focused. This research emphasizes in particular the barriers that prevent these digital era reforms from being implemented and laments the bureaucratic risk aversion, dated legal and policy instruments, and skills gaps that prevent governments from modernizing into competent, digital-ready organizations that satisfy the expectations of their digital citizenry (Clarke, 2019; Longley & Zimmerman, 2011; Margetts & Dunleavy, 2013).

Until recently, this focus on barriers and the various means by which they might be tackled was inevitable, at least as far as empirical studies of digital government went. Few governments were actually implementing the reforms that the digital government orthodoxy calls for, so these reforms and their effects on governance could not be studied in action. However, in the past few years, a number of governments have made notable investments in digital era reforms, such that the digital government orthodoxy now at work is to scale, or at least at more advanced stages of implementation. In Canada, we see this in the creation of digital government units at the federal

level, and provincially in Ontario and Nova Scotia. We also see this orthodoxy at play in new pieces of legislation, as in Ontario's recently introduced *Simpler, Faster, Better Services Act* (2019), and in the introduction of new senior leadership roles across a range of Canadian governments, such as deputy minister-level chief digital officers and ministers of digital government. Aspects of the new digital government orthodoxy are also driving interest in so-called smart city initiatives at the municipal level across Canada, and underpinned the recently concluded federal Smart Cities Challenge.[2]

These initiatives open up an important new avenue of research for digital government scholars and policy-makers. It is now possible not simply to probe the reasons the digital government orthodoxy has not been implemented, but rather to investigate the effects these reforms have on public sector governance when they are put to work. Early investigations in this space raise a crucial and until now largely overlooked question: Have we been too quick and uncritical in adopting the new digital government orthodoxy as a superior model of public management, one that should be aggressively pursued to meet citizen expectations? The next section responds to this question, focusing on data governance dilemmas as just one set of challenges that accompanies the new digital government orthodoxy when it is put into practice.

Data Governance: An Overlooked but Crucial Issue for Digital Governments

Three recent Canadian cases illustrate the data governance challenges that can arise when the new digital government orthodoxy is implemented. These cases are already inspiring, and should further spur, a research agenda that unpacks, critiques, and adds greater nuance to the digital government orthodoxy that has become widely accepted as gospel in the literature and in practice to date.

Case 1. Public Data Pulls from Private Actors: Statistics Canada and Canadians' Financial Data

In 2018, Statistics Canada requested the collection of detailed personal financial information of over 500,000 Canadians from the country's largest banks. The request was permitted under both the *Statistics Act* (1985) and the *Personal Information Protection and*

Electronic Documents Act (PIPEDA, 2000), given the data's collection could be justified on the grounds that such data supports government administration. Moreover, internationally, many jurisdictions see their financial institutions share such data with their governments in order to support government policy work. However, the initiative was quickly cancelled in response to mass public outrage following its announcement.

Citizens expressed concerns about privacy infringements, but also a broader set of data governance questions, including those covering how such data would be used by the government, and specifically whether it could be applied to target and punish citizens by, for instance, being shared with police in criminal investigations, or if such data were used to identify fraudulent government benefits or tax claims. Adding to these concerns, critics questioned whether Statistics Canada had sufficiently robust cybersecurity measures in place to protect the personal financial data of citizens that it sought to collect. Most fundamentally, the case illustrates the potential mismatch between pre–digital era laws governing public use of data—in this case, laws allowing Statistics Canada to ask private firms to share their documents and information for use in public administration—and the realities of the scope and scale of data and the sophisticated data analytic techniques that are now available to private and public firms (Scassa, 2018a).

Case 2. Governments Sharing Data with Governments: "Tell Us Once" Digital Service Reforms

So-called tell us once service reforms dictate that when citizens submit information to government it should be shared across different departments so that it need not be resubmitted by citizens at subsequent interactions. This approach is now being pursued globally as a best practice in digital era service design, including in Canada between different orders of Canadian government through the recently developed Canadian Digital Exchange Platform (D'Andrea, 2018; Treasury Board Secretariat [TBS], 2018a).

The "tell us once" model is justified on the grounds that it supports horizontal, "joined up" government and service design which better meets the needs of users, who are presumed to be little interested in repeatedly entering information into time-consuming

government forms. At the same time, "tell us once" initiatives raise a range of controversial data governance questions for Canadian governments.

At present, outside certain exemptions, the *Privacy Act* (1985) does not allow personal information collected by government to be disclosed to other actors (even within the same government) without consent, unless such disclosure is compatible with the purpose for which the information was collected or the information will be used in a way that is consistent with that purpose.

To navigate this legislative constraint, early forays into "tell us once" approaches that facilitate data sharing rely on an opt-in, consent-based model to support such data exchange. Yet, as Teresa Scassa explores in further detail in Chapter 9, and as already noted in the case of Statistics Canada's efforts to collect banking data, existing models of consent and the broader legislative regime protecting privacy rights in Canada are widely viewed as ineffective and ill-equipped for the dynamics of digital era data collection and use. Reflecting this perspective in the context of "tell us once" initiatives challenging departmental silos, a representative of the Office of the Privacy Commissioner explained in a 2016 speech that "while silos come crashing down in the name of modernization, the pillars of privacy protection that once accompanied them are not being replaced by anything nearly as modern" (Kosseim, 2016, para. 9).

Beyond these privacy concerns, the "tell us once" initiative also raises questions about which government actors will have access to citizen data and for what purposes; how such data can be applied to decisions about, for example, an individual's eligibility for particular services or benefits; and for what purposes linked data could be used to "nudge" certain behaviours among citizens.

Case 3. Private Data Governance as Governance Writ Large: The Case of Sidewalk Toronto

In 2017 Waterfront Toronto, a joint federal-provincial-municipal public corporation, issued a request for proposals for a "smart city" development within Toronto's Quayside District. Sidewalk Labs, a sibling company to Google within the Alphabet corporate family, was selected to submit a proposal for the development. Sidewalk Labs' proposal for the Toronto development was released in June 2019 (Sidewalk Toronto, 2019).

As with smart city initiatives globally, Sidewalk Toronto draws on the logic of the new digital government orthodoxy, promising more efficient, effective, and user-friendly local services through data-driven decision-making, data exchange between and among public and private actors, digital user feedback mechanisms, and bottom-up entrepreneurial innovation.

At the same time, the development has been challenged for potentially breaching basic standards of democratic accountability, a critique that has recently been launched at smart cities internationally (Green, 2019; Tieman, 2017; Wylie, 2017).

Most commonly, media and other public commentators seize on the privacy breaches that ubiquitous sensor technologies and video monitoring may usher in (van Zoonen, 2016). But the Sidewalk Toronto case also puts on the table more fundamental questions about the role that private firms should play in the governance of public services and spaces (Scassa, 2018b; Wylie, 2019).

This is not an entirely new concern. There is a long-standing literature and public discourse targeting the risks inherent in public service privatization (Christensen & Lægreid, 2002; VanDerWerff, 1998) and the use of public-private partnerships for land development (Krawchenko & Stoney, 2011). The digital government literature in particular is already preoccupied with the risks of private sector involvement in digital public service design and delivery (see Dunleavy et al., 2006; Johnson & Robinson, 2014), as evident in tech firms' provision of cloud computing capacity to governments, and in the role of banks in supporting online identity verification for government services (a practice adopted by the Government of Canada and others). However, the Sidewalk Toronto case vividly illustrates how private governance of public services and spaces can become more fraught with risks when it also involves vast data collection and data-driven decision-making. Do citizens want such data to be collected, and how would they want them applied to decisions around the design and management of their communities? Should such data be shared with the public, with other private firms, or with government, and under what conditions and for what purposes?

Most importantly, how should we go about answering these questions? Do we need new, private governance mechanisms to address these challenges, or are our governments equipped to provide sufficient oversight to design and manage the data governance arrangements necessitated by smart cities?

The Sidewalk Toronto case underscores how data governance can slide into governance in general. When public services and spaces are digitized, they produce and are subsequently shaped by vast troves of data. In these circumstances, the data steward (the actor or actors that control and manage those data) become de facto or de jure depending on the arrangement, the dominant governance actor wielding policy, oversight, and regulatory controls.

It is far from certain that in the case of digital government reforms involving private actors, the state is occupying a role as either the data steward itself or as an overseeing body that has the upper hand over private actors taking on this data stewardship role on their behalf. Where governments do not occupy either of these two roles, it is unclear how any data governance arrangement involving public spaces, services, or goods is democratically accountable.

Next Steps: A Research and Policy Agenda to Improve Data Governance and Digital Government in Canada

The data governance dilemmas discussed in this chapter should not necessarily lead the scholarly or practitioner community to discard wholesale the digital government orthodoxy that has emerged as the gold standard globally for contemporary public management. Rather, these data governance dilemmas should instead inspire a new research and policy agenda that refines this orthodoxy by balancing its goals of innovation, efficiency gains, and service improvements with sufficient attention to core democratic principles of equity, representation, and accountability. This work should be guided by three objectives.

Foster Greater Government-Researcher Engagement

In some respects, governments are further ahead of the public management and administration research community in awakening to the data governance challenges that accompany digital government reforms. Estonia, widely considered a global digital government leader, is regularly applauded for the security and privacy measures that shape how data are collected, shared, and used by government agencies. Likewise, the European Union's *General Data Protection Regulation* (GDPR) of 2016 sets comparatively robust standards for data minimization and consent. In Canada, the federal government

has received international attention for recently developed frameworks on the responsible use of artificial intelligence in government (TBS, 2018b). We also see an acute appreciation for the data governance issues at play in digital reforms among senior executives on the digital file in Canada, as evident in testimony provided by government officials in 2019 to a parliamentary study of privacy and digital government services (ETHI, 2019b).

Moreover, Canadian governments are investing to varying degrees in the digital skillsets and data literacy of their existing staff, acknowledging that they will be ill situated to tackle data governance challenges without this expertise on hand. For example, the Canada School of Public Service launched a new Digital Academy in 2018, and certain governments are working with the non-profit Code for Canada to recruit tech talent on short-term contracts.

These government-led efforts can only be improved by greater contributions and scrutiny from the research community. At a basic level, academic partnerships may be one way of addressing the digital skills and data expertise shortage in government in the short term.

More importantly, the research community needs to scrutinize the policy and legislative changes that are accompanying digital reforms. That said, in some jurisdictions, these changes are emerging at such a large scale and such a rapid pace that deep engagement from researchers becomes incredibly taxing, and in certain cases, simply unrealistic. For instance, Ontario's new *Simpler, Faster, Better Services Act* (2019) contemplates changes to a wide range of policies and legislative regimes, covering procurement, privacy, communications, and data sharing. The act was passed in the spring of 2019, and at the time of writing, three discussion papers soliciting feedback were to be released in the fall of the same year. The data strategy implementing its directives was set to be launched by the end of 2019. The speed with which this potentially massive set of reforms will be designed and implemented demands enormous, and arguably unrealistic, turnaround times for researchers hoping to contribute to the consultations.

In considering researchers' roles in this external oversight, it is important to note that data governance reforms emerging across Canadian governments are still often primarily rationalized on the grounds that they will lead to more efficient and user-friendly services, echoing the language of current digital government orthodoxy. This leaves open the question of whether and how these objectives

will be balanced in practice with concerns such as equity, representation, and accountability—concerns which may add time and costs to digital reforms or may justify halting them altogether. In these cases, it is essential that the research community illuminate the democratic principles that may be traded away in the name of digital service "innovations" and expose cases of "ethics washing" at play in data governance regimes.

In addition, researchers should ensure that the scope of data governance regimes introduced by governments is not focused on the narrow sub-issue of privacy alone, which to date has tended to be the dominant if not sole focus of governments claiming to be protecting citizens' digital rights amid new approaches to data collection and use. For example, documents discussing "tell us once" service reforms only mention privacy as a counterweight concern that will temper the initiative (see TBS, 2018a). And notably, the parliamentary study discussed in this chapter is titled "*Privacy* of Digital Government Services" (ETHI, 2019b, emphasis added), a focus that at times led committee members to ask witnesses to artificially and awkwardly limit their testimony on data governance and digital services solely to this one sub-issue.[3] Privacy protections absolutely deserve significant attention when designing data governance regimes but addressing privacy concerns alone is insufficient.

Finally, the research community should play an auditing function in evaluating the data governance arrangements that governments are already adopting, in particular in cases where these arrangements are not explicit either in their design or in their publicization, and where they involve private actors as mediators between citizens and state services. For instance, Canadians now use a host of privately run mobile apps and digital tools that support public service delivery (e.g., transit apps and tax filing software such as TurboTax). Researchers need to probe how data generated from these privately delivered services are managed and shared (or not) with private and government actors, and whether these services use and share data in ways that marginalize or benefit certain populations over others (Clarke, 2018, 2019; Scassa, 2015).

Uncover Canadians' Views on Data Governance and Digital Government Services

Remarkably—given the frequency with which this claim is made—there appears to be no concrete data to support the idea that citizens are disenchanted with their governments because the services they offer are viewed as below par compared to those on offer from Amazon and Google. To be sure, despite rising slightly in 2019, Canadians' reported levels of trust in government remain low (Edelman, 2019). However, studies on citizen trust are typically unable to unpack distinctions between the public's views of government in general and the civil service specifically. And even if low trust scores do reflect citizens' views of the civil service specifically—versus, say, Parliament, parties, or their local representatives—there is no evidence to suggest that poor public service experiences necessarily drive this disillusionment. Moreover, other studies, such as the one reported on by Petit-Vouriot and Morden in Chapter 2, suggest that Canadians are in general satisfied with their democracy (although again, such findings do not necessarily speak to citizens' views on public service quality per se, but rather the quality of elected representatives, political processes, etc.).

Observational studies connecting service experience and trust in government have at best identified a correlation between these variables; it remains unclear if trust in government can be improved by raising the quality of the public services a government offers (Bouckaert & van de Walle, 2003; Lægreid & Christensen, 2005). Moreover, studies on the trust-service relationship have not yet unpacked how the data governance arrangements underpinning a digital service innovation affect citizen trust in the state.

This last point is important to underscore since, as noted initially, the digital government orthodoxy has to date primarily been justified by the claim that governments will become redundant and that we will face a crisis of confidence in the state if government does not "meet citizen expectations." At present, we know very little about what these expectations are. We have no evidence to suggest that citizens want or expect their public services to look like those of private technology firms, and we may in fact find that citizens are ever less enthused by this proposition in the wake of the Facebook-Cambridge Analytica scandal and given daily reports of mass data breaches and controversial data mining conducted by firms in the private sector (Nair, 2019).

In fact, the little evidence we do have on citizen views of digital reforms suggests that Canadians do not unconditionally prioritize speedy, seamless service delivery when it comes to the online services they receive. For example, a 2018 study of citizens' views of smart cities found that, with some variation across demographics, Canadians are worried about how their data is collected, sold, and used to shape their behaviours in their cities and that they are unhappy with the current models of consent they are offered by governments and private firms (Bannerman & Orasch, 2019). Similarly, polling from Ipsos and the World Economic Forum suggests that Canadians have greater trust in the state than in the private sector to handle their data (Colledge, 2019). Another poll from the Canadian Marketing Association found that just over three quarters of Canadians (76 percent) are comfortable with personal data being shared when this comes with a benefit (e.g., an improved service) and when the data is properly secured (Canadian Marketing Association, 2018). Focusing again on privacy concerns at play in "tell us once" initiatives specifically, 2018 public opinion research conducted by the Government of Canada found that 58 percent of Canadians are very or somewhat comfortable with their personal information being shared across federal services, and between the federal and provincial and territorial governments. Here again, though, the research found that citizens' support for data sharing was conditional on their being given the option to opt in or out of these arrangements, and that they would want to know what information was being shared, with whom, for what purpose, and that the information would be secure (Phoenix Strategy Perspectives, 2018).

These findings only uncover the tip of the iceberg. In certain respects they raise more questions than answers when it comes to understanding what citizens value and expect regarding the use of their personal information, and data more generally, in the design and delivery of government services. For instance, existing research rarely asks citizens to factor in concrete trade-offs between data policy and service reforms when probing views on data governance, nor do studies sufficiently evaluate whether respondents understand the risks and benefits that certain data governance reforms would usher in.

In addition, we are sorely lacking in data that identifies how citizen views on data governance questions vary across demographics, and especially among traditionally marginalized populations (but

see Bannerman & Orasch, 2019; Colledge, 2019). This is a particularly important avenue of enquiry given the role that data collection and surveillance have historically played and continue to play in the racial targeting (Lum & Isaac, 2016) and colonial oppression of Indigenous people (Kukutai & Taylor, 2016; Rainie et al., 2019).

Last, we lack data evaluating citizens' views on various solutions to public data governance dilemmas. For instance, much attention has been paid of late to data trusts and to oversight models that allow citizens to audit who accesses their data across government (the model adopted in Estonia, for instance). Yet it remains unclear if these sorts of governance models will alleviate citizen concerns over governments' and private actors' collection and use of data.

In sum, without more varied and nuanced data describing public expectations and concerns on public data governance, governments and researchers driving ambitious data governance reforms in the name of service improvements are largely acting blindly on a set of assumptions that may lead to policy choices that betray rather than meet citizen expectations, especially in cases where citizens actually expect their governments to act in accordance with the democratic compact—respecting principles of procedural fairness, equity, and transparency—and not that they strictly deliver fast and easy-to-use services.

Engage a Broad, Multidisciplinary Group of Researchers

The field of critical data studies and the literature on smart cities in particular have spent considerable time and effort to dig into the challenges of data governance facing today's public institutions (Cardullo & Kitchin, 2018; Lauriault & McGuire, 2008). There are few connections between this research and that produced by academics focused on digital government and public administration reform. There is equally room for fruitful collaboration between public policy and administration scholars, legal academics, philosophers, and computer and data scientists; each of these disciplines will likely hold part of the answer to the ethical dilemmas that data governance raises for today's governments.

Researchers across all of these fields will strengthen their analyses by taking a longer historical view of the issues they are tackling. The pre-digital literature on co-production, horizontal governance, public management reform, and public service privatization are rich

with insights that are relevant to current debates on data governance. In fact, many of the dilemmas on the table today were entirely predictable had researchers and practitioners crafting and advocating for the new digital government orthodoxy taken heed of the lessons offered by these fields of study (Ansell & Gash, 2007; Brandsen & Pestoff, 2006; Christensen & Lægreid, 2002; Needham, 2008; Peters, 1998; Phillips & Howard, 2012). In particular, research on the failures of mass privatization under the New Public Management reforms of the 1980s and on the historical barriers to effective and democratically accountable cross-government collaboration have much to offer those grappling with the challenges of digital era data governance (Clarke, 2018).

Conclusion

A "Made in Canada" approach to digital government must be steeped in the values and democratic principles held by Canadians. These values and principles—and not simply the desire for fast, friction-free online transactions—invariably drive citizen expectations for government services. Accounting for these values may mean that Canadian digital government moves more carefully, with services remaining in some instances slower or clunkier than what we see in the private sector or in other government jurisdictions that are less concerned with or obliged to respect these principles. The upside: Canadians' faith in the democratic accountability of their state will remain intact (or at least not be further degraded). On this front, Canadian academics and policy-makers should become far less concerned with global rankings of digital government innovation. Citizens may be entirely comfortable seeing their government fall behind China, Denmark, India, and Singapore if lagged digital adoption also comes with robust protections for things like procedural fairness, privacy, and transparency.

Yet, at present, the digital government orthodoxy dominating research and practice leave little space to acknowledge the value that lagged adoption may play in securing sustainable, democratically legitimate digital government reform. To be sure, further research may reveal that Canadians "want it all"—services that rival those of Amazon alongside robust democratic controls, transparent process, and privacy protections.[4] In this case, having identified these potentially competing expectations, the task for governments and their observers becomes one of public education about the trade-offs

inherent in various data governance and digital government arrangements, in order to support more informed public debate on these questions. But before any of this work can begin, we need far more research to understand how data governance is currently unfolding in Canada and, most importantly, how Canadians want it to unfold. This chapter's provocations aim to kickstart this essential new research and policy agenda.

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Notes

1. Calls for "joined up" government (Bakvis & Juillet, 2004; Peters, 1998), public sector innovation (Bason, 2010; Borins, 2001; Osborne & Gaebler, 1992), investment in technocratic expertise (Aucoin & Bakvis, 2005; Wellstead, 2019), transparency (Yu & Robinson, 2012), evidence-based policy-making and engagement with service users (Axworthy & Burch, 2010; Pressman et al., 1973) are well established, and form part of a longer history of public management reforms that have since at least the 1970s explicitly endeavoured to upend the practices of twentieth-century industrial models of public sector bureaucracy (Clarke, 2019).
2. For more information on the Smart Cities Challenge, see: https://www.infrastructure.gc.ca/cities-villes/index-eng.html.
3. At one point in the committee proceedings, Member of Parliament and committee member Charlie Angus said,

   > Well, I have my government phone here and I get messages all the time telling me that I have to do such-and-such function right away, and I try to do the function and then it says that I'm not allowed to do it, because it won't recognize my phone. That's all interesting, but it's not what our committee is here to discuss. We are the privacy, ethics and accountability committee; we're not the government operations committee. There are many cool things and many neat things we could do. We could try saying that we're doing better government services, and if we believe that we can turn it all around, I think that's great. But our committee's job is to protect citizen rights, end of story. (ETHI, 2019a, paras. 152–153)

4. See David Eaves's testimony to the House of Commons Standing Committee on Access to Information, Privacy and Ethics (ETHI, 2019a).

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