

## CHAPTER 6

# The Ethics of Measuring Public Administration

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### SUMMARY

As data collection *on* government *within* government becomes more prevalent, a review of research on data ethics fit for use within public administration is needed. While guides on data ethics exist for public sector employees, as well as guides on the use of data about citizens, there is a dearth of discussion and few practical guides on the ethics of data collection by governments about their own employees. When collecting data about their employees, public administrations face ethical considerations that balance three dimensions: an individual dimension, a group dimension, and a public-facing dimension. The individual dimension comprises demands for dignity and privacy. The group dimension allows for voice and dissent. The public-facing dimension ensures that analytics enable public servants to deliver on public sector values: accountability, productivity, and innovation. The chapter uses this heuristic to investigate ethical questions and provide a tool (in appendix B) with a 10-point framework for governments to guide the creation of fair and equitable data collection approaches.

### ANALYTICS IN PRACTICE

- Collecting data on government employees involves a different set of challenges from collecting data on service users and private sector employees.
- Depriving public sector employees of privacy can erode democratic principles because employees may lose spaces to dissent and counteract malpractice pursued by powerful colleagues, managers, or political principals.
- Designing data collection in a way that enhances dignity serves several functions. For one, if we understand the problem of privacy in terms of disruptions of autonomy, collecting data in ways that enhance dignity can help to move away from zero-sum thinking. If public sector employees gain dignity from data collection, they are unlikely to see it as an unwanted intrusion. For instance, data could be collected that celebrate personal initiative, good management practices, and outstanding achievements, as opposed to disciplinary uses of data, such as identifying malpractice or inefficiencies. In some cases, employers

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might also consider disclosing the identities of participating individuals, if they consent, to highlight valuable contributions and give credit.

- Despite improved data quality, which helps to produce efficiencies, value-based decision-making will not become obsolete. Negotiating values is required as much as ever to produce evidence-based and ethically sound policy (Athey 2017).
- Development practitioners and donor countries working on data strategies for public sector reform in countries where political, religious, or other basic human freedoms are not guaranteed must thus tread carefully to guard against setting up data infrastructures that can be used to the detriment of public sector employees.
- Navigating ethical dilemmas sustainably requires that, when individuals join social groups in which different norms on data privacy are applied, they do so knowingly and are provided with the opportunity to advocate to change these norms. In practice, this can mean giving public sector staff unions a voice in what data are made available about their members and what guarantees of accountability they can offer the public in place of such data.
- Creating data approaches for public sector innovation thus requires that time and resources be set aside to make the process explicable to those affected. This is no simple task because governments still face skills gaps in cutting-edge areas of information technology. In many instances, governments will need to rely on external expertise to develop and maintain the skills of their staff to implement data solutions that are ethically sound and secure.
- What is considered ethical and morally right can depend on context. There are, however, questions that provide general guidance for how measurement can be conducted in an ethically sound manner, if they are asked regularly at key junctures of data collection, analysis, and reporting.
- It is important to construct objective measures of organizational and/or individual performance rather than relying only on subjective evaluations, such as performance appraisals.
- To construct an objective measure of performance using case data, one should ensure that cases are comparable to one another. This could entail comparing cases only within a homogeneous category or constructing a metric that captures the complexity of the case.
- Measures of performance for public sector organizations will depend on the specific context of study and data availability, but they should reflect both the *volume* of services provided as well as their *quality*.

## INTRODUCTION

Data, from the Latin *datum*, meaning “given,” are the embodiment of something factual, technical, value-free. Yet, data are more than that. They have and create monetary worth: “Data is the new capital” has become the catchphrase of the 21st century as their importance in value generation has increased. Data are central to the business models of most leading Fortune 500 companies (MIT Technology Review and Oracle 2016; Wang 2012). Their potential for poverty alleviation, growth, and development has been recognized. For instance, the World Bank’s *Europe and Central Asia Economic Update, Spring 2021: Data, Digitalization, and Governance* places “data” center stage (World Bank 2021a). Several governments have already demonstrated how they can use data to provide better services and protections to their citizens (UN Data Revolution Group 2014; World Bank 2021a). Collecting data on people who work in government has become part of using metrics to improve government service delivery (see table 6.1 for an overview of the types of data that governments can collect on their workforce and examples of how they can contribute to a mission of service improvement).

**TABLE 6.1** Types of Data Collected on Public Administration, with Examples

Type of data collected on public sector employees	Examples
Prehiring metrics	Qualifications, work experience, gender, age, ethnicity, sexual orientation, disability
Recruitment metrics	Test and application scores, background checks
Performance metrics	Output rate, user feedback, supervisor reviews
Learning and development metrics	Rate of promotion, courses taken
Incentives	Disclosing salaries, disclosing tax returns, pay scales, bonuses
Survey data	Attitudes, self-reported behaviors, practices
Linked data	Survey + administrative data, survey + geospatial data, administrative + geospatial data

Source: Original table for this publication.

Parallel to increased awareness of data as a source of value creation, greater attention is being paid to how rendering observations into data relies on structures of power and value trade-offs. Over the last decade, public debate on the ethics of data use has become a fixture of global news, with most articles focusing on the use of consumer data (Bala 2021; BBC News 2019; Fung 2019; Pamuk and Lewis 2021), some on governments’ use of data on citizens (for example, Beioley 2022a; Williams and Mao 2022; World Bank 2021a), and some on companies’ use of data on their employees (Beioley 2022b; Clark 2021; Hunter 2021; Reuters 2022). The intersection of the last two arenas—the use of data by governments on their own employees—has received next to no attention. This is likely because governments are only starting to catch up in the use of employment and within-government metrics and because claims to privacy are more complicated in the case of government employees.

This chapter tries to address this gap by providing a thorough, albeit not exhaustive, discussion of ethical issues specific to data collection on government employees. It regards *data* as a multifaceted construct: an amalgamation of points of information that—depending on how they are processed and analyzed—can become capital, commodity, truth, or all at once. Data’s function as truth, in particular, distinguishes them from other resources that have shaped world economies over the last centuries. Neither gold, oil, nor 5G has inherent value because of what it says about human behavior and the world we live in. In that sense, data and their use raise ethical conundrums not seen before in other phases of technological adoption.

Data linkage and triangulation offer the best chance for constructing measures of public sector productivity that are meaningful and provide an acceptable level of accuracy. Such developments have brought their own problems. Greater triangulation can lead to greater reliance on indicators. See the discussion in chapter 4 of this *Handbook*.

Choosing these indicators means choosing what to make salient in an official’s work environment.

Guides to ethical data use for both the private and public sectors now exist in many jurisdictions (Mehr 2017; Morley et al. 2020a; OECD 2019; Office for Science 2020; Open Data Institute 2021). Guidelines for the public sector tend to be heavily modeled on those for the private sector, meaning that they mostly speak to data interactions between the government and public service users. There is, however, a significant amount of data concerning processes and people within government. Collecting data on government employees involves a different set of challenges from collecting data on service users and private sector employees (see table 6.1 for an overview). The ethics of collecting data on government employees thus merits a separate discussion.

This chapter uses the terms “government employee,” “public sector employee,” and “civil servant” interchangeably. The majority of the concerns discussed here are relevant to people employed in central government functions as much as those employed in frontline services (“street-level bureaucrats”). The proportionate relevance of concerns will differ by the type of public sector employment and the regime type. As the aim here is to provide a general framework for data collection on employees in the public sector,

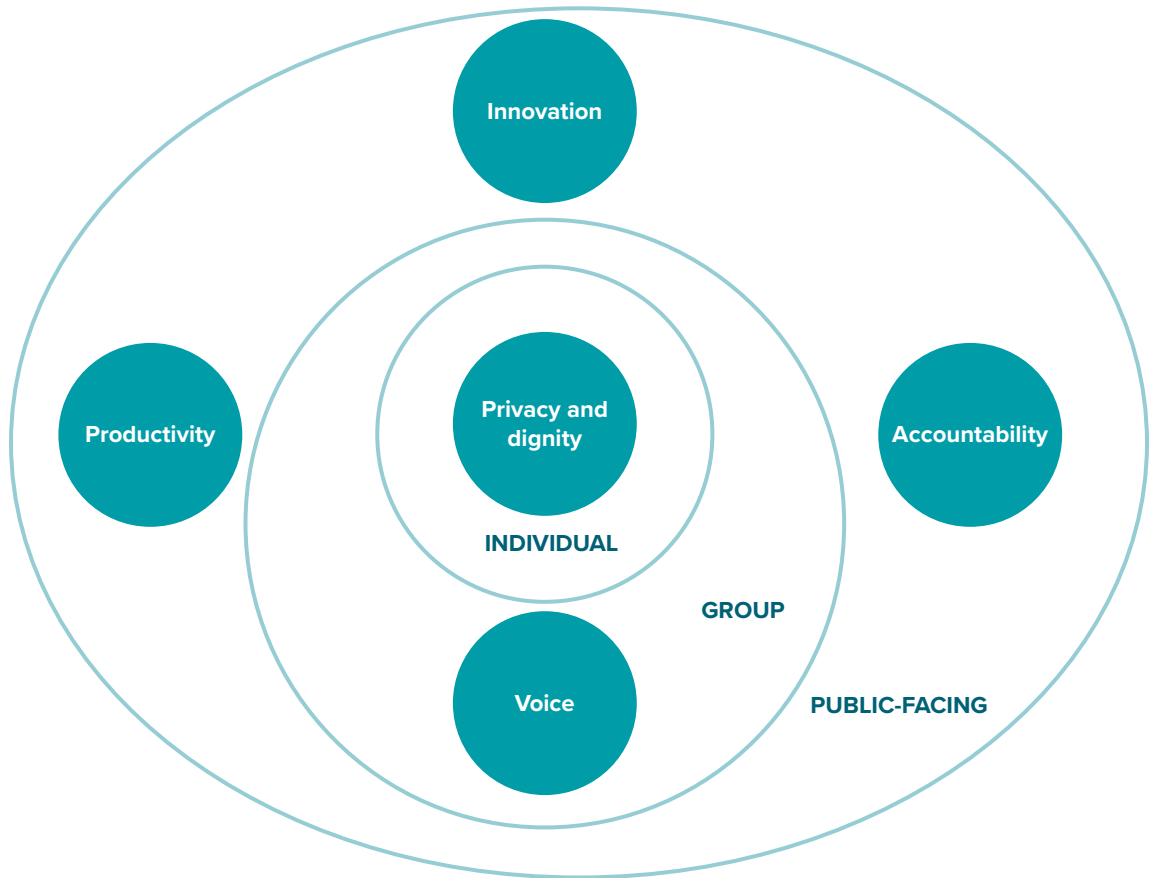
differences will not be discussed in detail, in favor of providing more space for discussion of how ethical data collection can be put into practice in the public sector.

### Data and Public Value

What public value *is* in and of itself subject to debate. Seminal scholarship on the topic, like Mark Moore’s work on public value (Moore 1995), eschews defining public value by ascribing the task to public managers and their interactions—perhaps better called “negotiations”—with political and societal agents (Rhodes and Wanna 2007). Deborah Stone’s (2002) work on public value highlights the ideals of equality, liberty, and security core to the idea of statehood and the role of government but stresses that none of these ideals can be fully catered to in most policy settings.

For a working definition of public value that serves the debate about the use of data on government employees, this chapter will focus on three broad aspects of public sector endeavors that can produce public value by producing goods and supporting equitable information exchange between the governed and the governing: accountability, productivity, and innovation (see figure 6.1).

**FIGURE 6.1 Ethical Dimensions That Require Balancing in Data Collection Efforts on Public Sector Employees**



Source: Original figure for this publication.

Note: As a heuristic, one can imagine key questions about the ethics of collecting data on public sector employees falling into three circles. The innermost circle describes the individual dimension. These questions mainly concern the privacy and dignity of the individual public sector employee. The middle circle signifies the group dimension. These questions concern voice and dissent, which are central to many functions that public sector employees carry out and the tensions that arise when collecting data on them as groups. The third, outermost circle encapsulates questions related to the qualities that define public sector value creation in relation to stakeholders: political principals, public service users, and society at large.

The chapter discusses accountability first because it is central to ethical exchanges between citizens and governments and employers and employees. It next focuses on productivity because it considers the creation of public value in the sense of government output. Finally, it turns to innovation because concerns about public value creation are not limited to what is produced but, particularly in the context of big data and artificial intelligence, include whether data used for public value creation can also produce innovation in the form of improvements or altogether new outputs. The chapter discusses all three concepts with a view to the wide-ranging types of data that can be collected to inform public administration, such as pre-hiring, recruitment, performance, and learning and development metrics (see table 6.1).

### **The Three Dimensions of Public Sector Data Ethics**

As a heuristic, the ethical considerations facing public administrations when collecting data on their employees comprise three dimensions: an individual dimension, which comprises demands for dignity and privacy; a group dimension, which relates to voice and dissent; and a public-facing dimension, which ensures that data enable public administrators to deliver on public sector values.

#### ***The Individual Dimension: Individual Dignity and Privacy***

Individual demands for dignity and privacy—the first dimension of ethical concern for employees—have been discussed widely in standard volumes on research ethics (Carpenter 2017; Macdonald 2017). Although the other two dimensions have received less attention, the first still merits discussion because, owing to their unique position in political-economic systems, public sector employees face a different set of demands, incentives, threats, and opportunities than private sector employees. For instance, because of the public sector's dominance in providing jobs and offering better wages in many countries (Düwell et al. 2014), exit options for public sector employees are more limited than for those employed in the private or nonprofit sector. This has implications for informed consent. Employees might accept trade-offs because of the constrained choice sets they face rather than satisfying their needs for privacy and dignity.

The temporal and spatial dimensions of how data on employees are safe-guarded also differ from the private sector. What is considered “good public service” and service “in the national interest”—and thus what types of measurement and data use are justified—can shift as governments and their view of the nation-state and societal ideals change. Such shifts in value positions affect both individual freedoms and those of groups within the public sector.

Another difference is created by the pressure to reflect political shifts in how government-owned organizations are run. For example, state-owned enterprises not only deliver services where market failures exist but also serve as model employers (for example, by pioneering inclusive hiring practices), act as symbols of national identity (for example, airlines and national health services), and can play a redistributive function (for example, by providing subsidized goods or privileged access to select groups of citizens and stakeholders; see Heath and Norman [2004] for a more extensive discussion of state-owned enterprises). The aim of data collection on individuals and groups in the public sector might thus change over time compared with the private sector. Some political factions believe many services and functions should not be performed by the public sector at all, or if they do not go this far, they have a deep-seated mistrust of civil servants. The threat of surveillance and a push to replace workers with compliant and efficient machines thus might be even more acute for the public sector than the private sector, depending on the political leaning of the government in power. As a case in point, remote and flexible work has become standard in many industries. Because of competition among companies and sometimes even industries (think aerospace engineers joining tech companies or banks), these standards are unlikely to be reversed. Data on sick days and other types of leave taken by employees in the United Kingdom suggest that private and public sector workers are absent for fewer days in a year than public sector workers. These data, and the supposedly empty seats (due to remote work) in government halls, led leaders of the UK Conservative Party to campaign for remote-work policies to be curtailed

(BBC News 2021; Cabinet Office 2022; Lynn 2022; Office for National Statistics 2022). How data on public sector workers are collected and used might change more with the political flavor of the day than with the industry standard or best practice in other fields.

### **The Group Dimension: Voice and Representation**

The second, group dimension becomes relevant in a setting where data relate to existing or ad hoc groups of employees. The group dimension recognizes that employees as a group have a right to actively shape what is done to them: they have a right to exercise *voice*.

Hirschman (1970) first introduced the concept of *voice*, alongside *exit* and *loyalty*, to define the dynamics of engagement with institutions. *Voice*, in this sense, is defined as the expression of opinions and thoughts in a manner that is impactful or at least has the potential to be impactful. Denying stakeholders the option of voice makes exit more likely, which, in an organizational setting, means disengaging from the cause or leaving the organization. Voice is thus a moral imperative as much as a practical necessity.

The need for voice in public service creates many ethical conundrums. Voice is necessary because “freedom defined as noninterference or the absence of burdensome restraints clearly will not do” (Preston 1987, 776). Civil servants need space to speak up, take initiative, disagree, and innovate.

On the other hand, for organizational goals to be attained, the expression of voice needs to be bounded. It requires agreement on a narrative about what is good, achievable, and desirable. This is particularly true in many public service organizations, where adherence to mission is an important guide to action and a motivator for public servants as a whole. Voice may place individuals or groups in the position of identifying themselves as in defiance of, or as distinct from, the prevailing public service culture.

Boundaries to voice are also necessary because of the mechanics of representative democracy: central to the role of civil servants is that they implement directives from democratically elected or appointed political leaders. Civil servants thus need to subordinate some of their own concerns to the policies elected representatives choose. Such subordination can be demanded more easily of individual civil servants. However, when voice is exercised on behalf of groups—for example, women, ethnic minorities, and people with disabilities in the civil service—boundaries are much more difficult to draw. Civil servant groups, then, are both implementers of democratic will and constituent groups with a right to voice at the same time.

### **The Public-Facing Dimension: Data to Operate in Service of the Public**

The third, public-facing dimension is particular to the public sector because it concerns data collected with a view to serving public service functions. It highlights the ethical challenges linked to creating public value and the organizational capabilities required to do so (Panagiotopoulos, Klievink, and Cordella 2019). Data collection and use must be designed in a way that enables government employees to operate effectively and efficiently, to collaborate and innovate.

Challenges located within this third dimension include balancing data security requirements, openness for innovation, and room for experimentation, as well as the certainty, consistency, accountability, and reliability of public service. While not necessarily mutually exclusive, these demands create tricky trade-offs. For instance, making data on what public sector workers do available can help the population to monitor them and call out malpractice; it can also help others spot ways of innovating, doing things better or differently; however, it can also create fear and political suppression and encourage inflexibility.

The following sections will discuss each ethical dimension in turn. Each section first outlines specific demands and incentives facing public sector employees before discussing how data can help to address ethical challenges and where they introduce new challenges that require closer scrutiny. Appendix B includes a framework for evaluating the ethics of measuring and tracking public sector workers. Practitioners can use this framework to think through the key tensions laid out in this chapter.



## INDIVIDUAL LEVEL: DIGNITY AND PRIVACY OF PUBLIC SECTOR EMPLOYEES

Dignity and, by extension, privacy are two values central to the ethical handling of data. Dignity (Schroeder and Bani-Sadr 2017) and privacy (Solove 2008, 1–25) are concepts that have caused controversy because they are complex and, at times, tautological. This chapter employs *dignity* to mean that humans—in this case, public sector employees—have worth in and of themselves that *they themselves* can define. This stands in contrast to seeing people as *means* to effect government outputs and *ascribing to them the essence of their ends*. Practically, dignity requires respect for the individual as a human being with free will, thoughts, and feelings. This means that the options available to people on whom data are collected should be central to the design of research efforts. For instance, if the designers of employee web pages decide it is nice to show pictures of staff, individual employees should be allowed to have their pictures removed if they do not want others to know what they look like, regardless of whether the employer agrees that this concern is central to what it means to respect their employees.<sup>1</sup>

*Privacy*, as it is used in this chapter, does not mean *anonymity*. Information might be disclosed anonymously—for instance, via a survey where no names are provided and IP addresses or similar identifying characteristics of the respondent cannot be linked to responses. However, this act still entails giving up privacy because what was internal and possibly unknown to others is now known to others. The reasons why such a strict definition of privacy is adopted in this chapter become clear when discussing the group-level dimension of data ethics concerning public sector employees: even when information cannot be linked to an individual, as soon as information can be linked to a group—public sector employees—their thoughts, behaviors, and environs become known to people other than the members of this group. Discussions of *individual* privacy, the focal point of this section, must therefore be separated from discussions of *collective* privacy, which will appear in later sections.

Relatedly, *privacy* as it is used here is understood in terms of a “typology of disruptions” (Solove 2008), which acknowledges that the definition of privacy is highly contextual. Just as quirks are distinguished from mental health disorders, disclosure, transparency, and openness are distinguished from infringements on privacy by the disruption they cause. Does a person only occasionally need to return home to check whether the stove was left on, or is this a daily occurrence that interferes with a person’s life? Is it a minor issue that a public servant’s address is publicly available online, since everyone’s address is publicly available online, or is it a danger to the public servant’s safety and right to conduct personal matters in private? Until the 1980s and into the late 1990s, it was common in Western European countries for the phone numbers of the inhabitants of entire cities to be listed, publicly available in white pages or equivalent phone and address directories. In several Scandinavian countries, it is still the case that every resident’s social security number, address, and taxable income is made publicly available. The key differences are the extent to which something is experienced as a disruption, as opposed to the norm, and the extent to which people can stop a practice if they start to experience it as a disruption. In the case of telephone and address registries in democracies, residents can use their voting powers to change the laws surrounding the publication of personal details. It is less clear how employees—particularly state employees, of whom transparency is expected—can demand change when they find practices intrusive. Privacy, as defined in this chapter, is thus closely linked to the idea of control: the extent to which civil servants control how much is known about them when they experience it as intruding on realms they perceive as reserved for their private as opposed to their professional (work) persona.

Commonly, informed consent procedures serve to preserve dignity by affording individuals the opportunity to ascertain what they see as acceptable in how they or their data are handled. Informed consent means that the individuals on whom data are collected or who are asked to divulge information are fully informed about the purpose of the research, how their data are handled, and how they will be used. Even if they agreed at an earlier stage, individuals ought to be given the right to withdraw their consent at any stage, which requires the secure deletion of any data collected on them. Typically, there are few options for public officials to opt out of servicewide databases.

The extent to which informed consent is de facto voluntary is important. In situations of near employer monopoly, in which exiting the public sector is not a viable option, and in situations of suppression, in which exercising voice is not possible, employees might consent to data collection because they see little other choice.<sup>2</sup> This mirrors problems with consent ubiquitous in today's highly oligopolistic landscape of online service providers: if one is pressed to quickly find a parking spot and only Google Maps can pinpoint one with timeliness and accuracy, one is likely to accept the data use conditions that come with this service. The viability of informed consent is intricately bound to the ability to exercise exit and voice.

Valuing dignity also extends to claims to privacy. People ought to be allowed to keep certain details of their lives and personhood protected from the scrutiny of others—even their human resources (HR) managers. Any form of data collection on individuals will require some abnegation of privacy. Research ethics typically tries to acknowledge this right by providing confidentiality: a declaration that the information disclosed to the data collector will be known to and used by a limited, preidentified set of people. In the public sector, this is the case, for example, when an internal research or strategy unit collects survey responses from civil servants with a view to sharing them with HR and finance operations to improve planning, staffing, and training.

The principle of confidentiality in research brings to mind that research ethics has its foundation in the Hippocratic Oath and in bioethics. Patients trust their doctors to share their medical information and concerns only with relevant personnel, and always with the intention to help the patient. In a medical setting and in most everyday circumstances, we tend to assume confidentiality and do not give explicit consent to use otherwise private details divulged as a part of interactions. We do so willingly because disclosing information encourages reciprocity, builds trust, and helps shape the world around us to better meet our needs. Reductions in privacy are not a zero-sum game but can offer substantial welfare gains for the individual and society at large when negotiated carefully. The individual is, however, poorly positioned to negotiate these tradeoffs against the interests of large corporations or the government. As discussed above, this is particularly true if an individual would like to exercise exit or voice when the options presented to them do not inspire trust.

In response to this problem, legal protections have been put in place to guard against the worst misuses of data. Data regulations such as the European Union's General Data Protection Regulation (GDPR) require that entities collecting data clearly lay out which data are collected, how they are handled, and who has access to them. California, Virginia, New Zealand, Brazil, India, Singapore, and Thailand have all implemented legislation similar to the GDPR in recent years. However, detailing how data are used typically leads to documents that require, on average, 10 minutes to read (Madrigal 2012). As data collection has become ubiquitous, the time burden that consent processes introduce implies that most of us have become accustomed to quickly clicking through consent forms, terms and conditions, and other common digital consent procedures. This means that in practice, consent is either based on trust rather than complete knowledge or, in the face of a lack of exit and voice options, is coerced.

Following legal guidelines is thus not enough to ensure that dignity and privacy concerns are adequately addressed. Those planning to collect data on public sector employees must take into account what ethical challenges could arise, how to offer exit and voice options, and how to foster trust. This is not a simple feat. The discussion will thus next turn to how three common dilemmas concerning data privacy and dignity in the public sector can be addressed.

### **Government Employee Data, Dignity, and Privacy**

Discussions of data ethics concerning the dignity and privacy of civil servants could fill volumes. This chapter, therefore, cannot offer a comprehensive account of the debate. Instead, it focuses on three likely areas of concern for someone wanting to collect data on civil servants: trade-offs surrounding access, transparency, and privacy; how data collection can be designed to enhance dignity; and how data transfer and storage should be managed to safeguard privacy and dignity.



## Trade-Offs Surrounding Access, Transparency, and Privacy

When collecting data on public sector employees, it can be argued that knowing about their behaviors and attitudes is in the public interest. For example, using data to identify inefficiencies associated with public employees is only possible without their active consent, but is certainly in the public interest. In many jurisdictions, public sector workers do not have to be asked for their consent for research to be conducted on them as long as it can be shown that the research is in the public interest. In most countries, where these provisions are not made explicit in the law, data ethics codes include clauses that allow the requirement for consent to be lifted if there is a strong case that research is in the public interest. These waiver clauses tend to use unequal power relations as grounds for the lifting of consent requirements: researchers might be prevented from gaining access to public institutions if they require explicit consent from people in positions of power who are hostile to the idea of research (Israel 2015). Based on the public-interest argument, consent procedures can, in many instances, be circumvented when researching public sector employees.

A reduction in privacy and an overruling of informed consent can thus promote *accountability*. They can also enhance *transparency*. Having more in-depth knowledge of the behavior of government employees can help to increase government transparency: just as the work of election volunteers was live streamed during the 2020 US elections (Basu 2020), civil servants could be put under constant surveillance to increase transparency and inspire trust. Evidence from the consumer context suggests that extreme levels of transparency can create a win-win situation, in which customers rate services more highly and are willing to pay more when they can monitor how a product is created or a service delivered (Buell, Kim, and Tsay 2017; Mohan, Buell, and John 2020). Radical transparency could thus inspire greater trust and mutual respect between government employees and government service users as opposed to simply reducing dignity and privacy by increasing surveillance.

However, promoting one type of public good might infringe on another (see the discussions of contradicting policy choices in Stone 2002). Privacy is instrumental to guarding collective freedom of speech and association (Regan 2000). Depriving public sector employees of privacy can erode democratic principles because employees may lose spaces to dissent and counteract malpractice pursued by powerful colleagues, managers, or political principals. To date, the ambiguity of public-interest claims has been most commonly revealed in cases of whistleblowing (Boot 2020; Wright 1987): government whistleblowers often endanger some public interests (for example, national security) in favor of others (for example, transparency). How convoluted claims to public interest can become is highlighted when whistleblowers reveal previously private information about some actors with a public-interest claim (for example, disclosing that a particular person was at a particular location at a particular time or making private communication between individuals public). The privacy of whistleblowers needs to be protected in order to shelter them from unfair prosecution and attacks so that future whistleblowers do not shy away from going public. The future public interest, then, is guarded by protecting the present privacy of the whistleblower, who might have rendered public what was previously thought to be private “in the public interest.”

In this sense, what is in the public interest and what the limits are to a utilitarian logic of increased surveillance must remain part of the public debate. For public debate to be a viable strategy for dealing with the contradictions of disclosure and the protection of privacy in the public interest, society must protect fora and institutions that publicize such issues, involve powerful stakeholders, and have tools at their disposal to enforce recommendations. To date, this often means supporting the capacities of the media, civil society, the political opposition, and the judiciary to fulfill these functions. Researchers and governments thinking about collecting data on government employees need to assess whether these institutions function sufficiently or, if not, whether actions can be taken to remedy their absence. For instance, governments could create independent review committees, actively publicize planned data collection efforts, and provide extra time for public consultations. In settings where such mechanisms lack potency, the international community, most likely in the form of intergovernmental organizations and donors, has a responsibility to monitor how changes in data regimes affect the dignity, privacy, and welfare of data subjects and the citizenry more broadly.

This is important not solely with a view to balancing trade-offs between transparency, public access, and privacy. The next section looks at how a thorough design and review of government data collection strategies could help to create regimes that enhance dignity despite entailing reductions in privacy.

## Designing Data Collection to Enhance Dignity

Designing data collection in a way that enhances dignity serves several functions. For one, if we understand the problem of privacy in terms of disruptions of autonomy, collecting data in ways that enhance dignity can help to move away from zero-sum thinking. If public sector employees gain dignity from data collection, they are unlikely to see it as an unwanted intrusion. For instance, data could be collected that celebrate personal initiative, good management practices, and outstanding achievements, as opposed to disciplinary uses of data, such as identifying malpractice or inefficiencies. In some cases, employers might also consider disclosing the identities of participating individuals, if they consent, to highlight valuable contributions and give credit. (See also Israel [2015] for case studies of how sociological and anthropological researchers typically acknowledge the role that research participants play in scientific discovery.)

Apart from a normative view of why data collection efforts should enhance dignity, there are clear utilitarian reasons: this can improve data quality, trust, and openness to data collection and data-based management practices. Public sector employees might refuse to disclose their true opinions when they feel pressured into consenting to data collection. This can, for instance, be the case when managers or political principals provide consent on behalf of their employees. Lifting consent procedures with public-interest claims can backfire in such cases. Engaging with employee representatives and living up to promises of transparency concerning the objective of data collection can help.

Processes that ensure that data collection is linked to clear action points can further help to guard the dignity of research participants. Data collectors have an additional incentive to do so because the validity of responses and response rates will likely deteriorate when staff see that data collected on them are not used to their benefit.

Staff will more likely develop trust in the process and engagement with results when they have a stake in developing research questions and action plans following up on results. Principles of action research, including building phases of review, consultation, and revision into the research process, could help to create data collection strategies on public sector employees that enhance the dignity of the individuals involved.<sup>3</sup>

## Designing Data Transfer and Storage to Guard Dignity and Privacy

Both dignity and privacy are at risk when data are not secure. Cyberattacks are becoming more common. For example, in 2021, the Washington, DC, Police Department was subject to a massive data leak following a ransomware attack. Disciplinary files and intelligence reports including names, addresses, and sensitive details about conduct were leaked into the public domain (Suderman 2021). In 2015, the Office of Personnel Management (OPM) of the US federal government was subject to a hack that led to the leaking of the personal data of millions of employees, many of whom suffered from identity theft for years following the data breach (CBS and the Associated Press 2015).

Guarding dignity and privacy in this sense is as much a technical as a moral issue. Legal frameworks such as the GDPR have been created with this in mind. Several international best-practice guides on data protection elaborate on the technicalities of such efforts. Good examples include sections on data protection in *Development Research in Practice: The DIME Analytics Data Handbook* (Bjærkefur et al. 2021) and the Organisation for Economic Co-operation and Development's (OECD) Privacy Guidelines (OECD 2022).

## GROUP LEVEL: VOICE AND DISSENT

As the chapter so far has reviewed, there are many aspects of data collection that affect government employees as individuals. These are perhaps most comparable with the concerns affecting private persons and research subjects. There is, however, a dimension that becomes particularly important when thinking of public sector employees as a group and the groups within the public sector that can be created based on observable characteristics or self-elected labels.

As described above, the concept of *voice*—alongside *exit* and *loyalty*—was coined by Hirschman (1970). In the public sector, voice amounts to the ability of employees to express opinions and the potential of these expressions to impact how public administrations are run. When exit options are limited, voice becomes a more pertinent tool for employees to exercise control over their environment. In public sector employment, voice is also conceptualized as part of the job of civil servants. For instance, the UK's Civil Service Code demands that public administrators “provide information and advice, including advice to ministers, on the basis of the evidence, and accurately present the options and facts” and that they “not ignore inconvenient facts or relevant considerations when providing advice or making decisions” (UK Government 2015). Voice in this function is mainly intended to enable elected officials to deliver on their policy programs. If, however, elected officials endanger public sector values and the integrity of rule-based and meritocratic government institutions, a professionalized bureaucracy is expected to exercise voice to counteract this erosion. This can take place within legitimate reimits of voice and discretion (Miller and Whitford 2016), or it can take the form of dissent (Kenny 2019).

Demands for voice are intricately linked to those for productivity and innovation. In organizational studies, it has long been established that psychological safety—the feeling that employees can voice ideas and concerns without facing an immediate threat to their jobs or selves—is necessary for innovation and sustainable increases in organizational performance (Baer and Frese 2003; Nembhard and Edmondson 2006). Empirical research shows that more-diverse workplaces, in the private and public sector, are more-productive workplaces (Alesina and Ferrara 2005; Hjort 2014; Rasul and Rogger 2015).

Voice has also been conceptualized as civil servants' representation of the interests of the demographic groups to which they belong—a kind of “passive voice.” It is theorized that they do so through increased attention to these groups' needs and a heightened awareness of how to design and deliver public services to address them (summarized under theories of representative bureaucracy; see Kingsley [1944] 2003; Meier 2019).

Data on civil servants can help to promote or curtail voice in its active and passive forms. With regard to the passive form of voice, data can showcase how certain groups (for instance, women or bodily disabled people) are affected by or think differently about certain employment policies. With regard to its active form, data can be used by groups to raise issues themselves. For example, if the number of bullying or sexual harassment complaints filed by a department or government subdivision is made public, victims understand that their cases did not happen in isolation, and numbers can be used to pressure leadership for change.

### Government Employee Data, Voice, and Dissent

Data on groups of public sector employees raise ontological and utilitarian questions. The former questions relate to how data can define groups and how groups can use data to define their workplace, work, and position between political principals and citizens.<sup>4</sup> The latter questions concern how the risks and benefits of using data relate to attempts to improve working conditions and service delivery in a way that is responsive to the needs and wants of groups that become apparent through the group-level aggregation of data.

Assigning group labels to individuals implies that their individual rights and identities are pegged to those of a group—potentially one with which they do not identify or of which they did not consent to be part. Such *passive group* membership has typically been applied to individuals grouped together as “vulnerable” or “fragile” populations (Grantham 2020, 39). As the now-mainstream debate on gender and gender pronouns has raised, similar questions can be applied to group labels that have traditionally been considered more stable.

Consent can be a vehicle to ensure the alignment of grouping with personal preference. For instance, in surveys, civil servants can opt out of providing demographic details. However, for most administrative data collection efforts, consent is limited or wholly unfeasible. Employees might be grouped together as “fit for early retirement” or as a target group for “offering overseas posting” because of their age, gender, tenure, family situation, and other administrative data available to other administrators. These groups might not align with the desires or career ambitions of the grouped individuals. Basing planning decisions solely on results arrived at from demographic or ad hoc grouping risks wrong conclusions. The availability and increasing richness of data available on groups thus cannot substitute for meaningful engagement with them. These arguments are touched on by Bridges and Woolcock in chapter 4.

The creation of groups and the pegging of data to group labels not only creates risks; it also holds immense positive power. Data can open up avenues for voice because they showcase where differences between groups exist. For instance, in 2014, the cross-organizational initiative Data2X started a global drive to increase the collection and use of data on women and gender-disaggregated data. The initiative has helped to increase women's access to finance and meaningful work and has significantly reduced maternal mortality rates (Grantham 2020). In the context of collecting data on public sector employees, data can help practitioners better understand issues such as the proportionality of the representation of groups in different positions and sections (for example, Are women proportionally represented in leadership positions? Does the proportion of civil servants from minority groups map onto their proportion in the general population?); planning for skills gaps (for example, Are there enough people with advanced IT or data analysis skills in each department?); or spotting management problems in part of the civil service (for example, Do people staffing local government offices have the same level of goal clarity as those working in central locations?). In this sense, data can increase voice and benefit society.

Navigating the collection and use of data on public sector employees requires moving beyond acknowledging how data shape realities to discussing how the risks and benefits created by this process can be negotiated. Data can catalyze employees' voice by giving groups a platform to assess metrics pertaining to these groups compared with relevant benchmarks. For instance, detailed employee data including demographic details can help practitioners to understand what predicts turnover and whether certain staff members—ethnic minorities, women, or people with care responsibilities—can be retained as well as others (Grissom, Viano, and Selin 2016). Where performance data are available, data on staff can be linked in order to better understand how staffing decisions affect service delivery. For example, employing ethnic minority teachers in publicly funded schools in otherwise homogeneous districts has been associated with better performance for ethnic minority pupils attending these schools (Ford 2022).<sup>5</sup> Data disaggregated by groups can also help provide better access to training and career progression for public sector employees.

As Viswanath (2020) notes, data equity, in terms of knowing what ranks people from different sections of society can attain in public service, is critical to providing better service (in line with theories of representative bureaucracy) but also to providing greater equity in opportunity for public sector staff. As a case in point, public sector unions in Canada have successfully used wage data disaggregated by gender to support calls for gender-based pay parity (Card, Lemieux, and Riddell 2020). This has created more equality between men and women in the public sector and, as a consequence of the non-negligible amount of the population employed in the public service, has improved pay equality across a large section of society.

At the same time, there is no guarantee that the availability of data will safeguard the rights of minority groups and promote equity and equality of opportunity. Data on groups can also be used to curtail voice. For example, while collecting recruitment metrics could heighten the potential for governments to hire a more diverse workforce, it could equally enable them to weed out people who are deemed less desirable. Such weeding out could be based on demographic details, but it is increasingly also founded on what potential employees say online. Hiring managers can easily introduce bias into the hiring process if the recruitment process is not sufficiently anonymized. For instance, it might be important to collect data on which universities applicants attended. These data, however, can also be used by hiring managers to prescreen candidates—consciously or unconsciously—based on associations of quality and merit with these universities. In a similar vein, even though hiring managers might not get access to detailed information on routine background checks, they can use an applicant's name and previous employer or university affiliation to conduct their own online searches.

Indeed, public sector unions in Canada and Australia now actively discourage their members from posting online or having an online presence that can be linked to their identities, in fear of potential discrimination for current employment and future employment opportunities (Cooper 2020a, 2020b). In some government contexts, there is the danger that governments collect information on employee opinions systematically. This is problematic not only at the individual but also at the group level. Investigations by big data scholars have illustrated how, for instance, people using hashtags on Twitter related to the Black Lives Matter movement could be grouped together (Taylor, Floridi, and Sloot 2016, 46). In a public sector context, such information could be used to map out the political affiliations of employees.

Other administrative data could be used for targeting based on religion or personal circumstances. For instance, data scholars have shown that people can be identified as devout Muslims by mapping out their work break schedules over a year (Rodriguez 2018).

Development practitioners and donor countries working on data strategies for public sector reform in countries in which political, religious, or other basic human freedoms are not guaranteed must thus tread carefully in order to guard against setting up data infrastructures that can be used to the detriment of public sector employees.

## SYSTEM LEVEL: PRODUCTIVITY, ACCOUNTABILITY, AND INNOVATION

Moving on from the group dimension, this section discusses the most distinctive aspect of data collection on public sector employees: ethical concerns that relate to the duty of public sector employees to serve the public, which can support but also interfere with safeguards designed to protect against unethical data strategies.

Public sector values are commonly defined as the set of qualities of public sector work that make for an ideal public service. Such values typically pertain to productivity (delivering public goods and services in an efficient way), accountability (delivering in a way that is answerable to the public and key stakeholders), and, ever more commonly, innovation (constantly adapting to keep pace with and anticipate societal and economic developments). Each of these qualities can be served by data. The next sections discuss them in more detail.

Other public sector values that are often discussed include equity, transparency, impartiality, and a concern for the common good. As equity and impartiality are supported by mechanisms enforcing accountability and a degree of transparency is required for accountability to be effective, these themes will not be discussed here separately. Similarly, a concern for the common good is difficult to define. As this chapter takes a view built on economic theories that see the common good as the product of welfare-maximizing actions, the next section will discuss the ethics of data collection for the common good together with those aimed at increasing productivity.

### Productivity

Public sector workers are meant to maximize productivity in service of the public, in response to their political principals' directives and while remaining accountable to a diverse group of societal stakeholders. In the 21st century, execution is not enough; public sector employees are also expected to do their work as efficiently as possible. They are expected to maximize quality output per tax dollar contributed by each tax-paying citizen. Core to the task of a public sector employee is thus to be productive (for the common social good).

This is not guaranteed.<sup>6</sup> Public sector workers have a lot of room to diverge from the productive delivery of public service. Public sector workers have specialist knowledge and skills that make it difficult for outsiders to assess the quality and efficiency of their work. A more fast-paced economy and social changes also demand that the public sector be more flexible and responsive, which requires awarding more discretion to public sector workers.

Public sector productivity is difficult to measure because it is a collective effort. There are no market prices readily available for many of the complex goods and services the public sector provides. Efficiency is often a poor marker of success because the services are supplied by the government precisely because there are market failures.

In lieu of rule-based control, oversight in the form of monitoring metrics has become more common. Data and analytics can help overcome the feasibility of, and individual employees' proclivity for, ethical violations. They can ensure that officials are focused on the productivity of public service. Advances in the measurement of productivity have been made, in particular through combining micro- and macro-data, such as process data, project- and task-completion rates, staff and user satisfaction data, performance evaluations, and cost-weighted budget data (Somani 2021).



### **Data Ethics and Public Sector Productivity**

Both accountability and productivity can be promoted by making data on public works projects publicly available and easily understandable. Lauletta et al. (2019) illustrate how a website that geotags public works projects in Colombia can speed up project completion. Several administrations have started using predictive algorithms to allocate inspectors (for example, fire and food safety inspectors) more efficiently. Data can help to promote meritocracy by identifying bottlenecks and resource deficiencies. If data are used to address resource inequalities, they can help public sector workers be productive.

Nehf (2003) uses the term “mischaracterization as harm” to summarize the core of ethical problems related to measuring productivity in the public sector: imperfections in measurement can create misjudgments that are harmful to the dignity of the individuals and groups described as much as they cause more tangible social harm. For instance, when productivity is measured without appropriate awareness of epistemological challenges, it can encourage management to targets. In the context of education, this can lead to grade inflation (De Witte, Geys, and Solondz 2014; Hernández-Julián and Looney 2016). In health care, it has been linked to underinvestment in preventative care (Bevan 2009; Gubb 2009).

Problems with construct validity could unfairly sideline certain groups. For instance, the amounts of sick leave taken and overtime logged are not necessarily good measures of productivity, skill, or work effort. If employees struggle with their health, it infringes on their dignity to equate sick leave with a lack of motivation or commitment to organizational performance. In a similar vein, employees with care responsibilities might be unable or reluctant to work overtime but could nonetheless be stellar performers.

The lack of agreement about what is productive for many job roles in the public sector—or perhaps the agreement that there is no clear definition—means that measurement risks undermining principles of meritocracy. Public services whose productivity is hard to measure might be defunded relative to those whose measurement is easier. Personnel who manage to targets rather than those who create meaningful value for citizens might get promoted. It can also create imbalances in workforce planning. Specialists have been found to be disadvantaged in terms of career progress in the civil service. This seems to be connected to a lack of adequate data on skill matches and to managers’ inability to evaluate what good specialist (as opposed to generalist) performance looks like (Guerin et al. 2021).

An ethical approach to measuring productivity will entail an emphasis on understanding the values that underlie what is considered productive and how power relations shape how problems are defined and acted upon. For example, microdata can also help show where public sector employees might engage in corrupt practices. An ethical approach, however, does not guard against using data on corruption selectively (Nur-tegin and Jakee 2020). Depending on the relative political power of different governing parties and the opposition, data collection efforts might be channeled away from some activities to focus on others. Who has power over data collection efforts and the use of data is thus a question that lies between data capabilities and their possible positive effects on public sector productivity and how ethically public sector personnel are treated.

As discussed in chapter 4 of the *Handbook* effective validation and benchmarking exercises can help to create meaningful and ethically sound measurement of public administration. The chapter argued that a balanced approach to measurement ensures that measurement is meaningful. This chapter argues further that a balanced distribution of power over that measurement and corresponding data will make it more likely that measurement and data are used ethically and justly. Enabling stakeholders to provide checks and balances against data misuse and opportunities for review (see the framework proposed in appendix B) remains key.

Epistemological and practical problems are here to stay. Epistemologically, what is defined as productive is questionable. Questions range from the definitions of core work tasks and what makes an externality to what metric should be used to signal positive impact. Quicker social security claim processing times might signal productivity, or a reduction in maternal mortality at public hospitals might speak to the quality of care, but neither speaks to the dignity with which service users are treated—arguably, an attribute central to public service. Despite improved data quality, which helps to produce efficiencies, value-based decision-making will not become obsolete. Negotiating values is required as much as ever to produce evidence-based and ethically sound policy (Athey 2017).



## Accountability

We next turn to the other two key public values that elicit tough ethical challenges for data collection in the public sector: first, accountability, then, innovation. One of the defining characteristics of public sector work is the demand for accountability. Public sector workers are expected to be answerable and liable when they do wrong. The group of people to whom they are answerable is large and diverse. It includes the clients of their services, members of the communities in which their services or policy actions take effect, and organizational stakeholders, such as firms and civil society organizations, whose cooperation might be necessary to arrive at sustainable and equitable policy solutions.

Creating an accountable public administration is a challenging task. The need for delegation and specialization requires that public administrators be provided with discretion. Theory and empirical evidence suggest that political control over the bureaucracy is not a sufficient lever for accountability (Brierley 2020; Gailmard 2002; Keiser and Soss 1998; Meier, Stewart, and England 1991; Raffler 2020; Weingast and Moran 1983; White, Nathan, and Faller 2015).<sup>7</sup>

Democracy in the deep sense—one that goes beyond elections and rests upon an informed and politically active population—requires that policy and its implementation can be scrutinized by the public. The quality of a democracy hinges on the ability of its population to be informed about what state apparatuses do, to voice their opinions about them, and to enforce policy change (Dahl 1998). Bureaucratic accountability also requires transparency and explicability.<sup>8</sup> As data become more widely available, it becomes easier for experts, civil society groups, and other stakeholders to scrutinize how well the government delivers on providing social goods. Data on the public sector and the civil service thus play an important role in helping to provide accountability.

However, this does not come without challenges. Ethical questions surrounding the use of data for accountability promotion center on the difference between transparency and explicability, concerns surrounding throughput, and the risk of causing unacceptable negative outcomes unintentionally as a result of data management solely focused on external accountability. Such risks require the circumspect creation of data infrastructure.

## Data Ethics and Explicability

*Explicability*, as it is used here, means the quality of being communicated in such a way that most people understand what a thing is or what a process does, its purpose and use. For instance, an algorithm is explicable if the average person could have a heuristic understanding of what it does (for example, rank news items by relevance to the reader based on their previous online behavior, such as clicking on and viewing articles or liking posts). Explicability does not require a person to know the technical details of how this is achieved (for example, the math behind an algorithm's ranking logic). Explicability is thus different from transparency. A transparent algorithm might be open source if everyone could read and check the code that is used to create it, but it is likely not explicable to most people.

A case in point relevant to public services concerns the fact that governments across the globe are increasingly adopting data dashboards that summarize progress on targets for staff and the public. They exemplify how data can provide an easy mechanism that encourages transparency for accountability. For example, dashboards can be used by citizens to monitor the progress of city governments' attempts to improve transport systems by making visible live traffic data, problems, government intervention, and response times (Matheus, Janssen, and Maheshwari 2020). It is, however, important to bear in mind that, like any technological fix, dashboards are no panacea leading to increased accountability (Matheus, Janssen, and Maheshwari 2020). They need to provide information that is actionable for civil society and other stakeholders.

In the context of public service delivery, which increasingly takes a networked or matrix-like form whereby multiple agents within and outside government collaborate to deliver public services, data for accountability need to communicate who responsible parties are and how they can be held to account if they do not deliver on promises. A case in point is the Inter-American Development Bank's MapaInversiones regional initiative, which is "an online platform that allows users to monitor the physical and financial

progress of public investment projects through data visualizations and geo-referenced maps” (Kahn, Baron, and Vieyra 2018, 23). As an evaluation suggested, the project successfully decreased the time taken to start and complete infrastructure projects. Those projects that published their details and progress via the platform fared better than those that did not (Kahn, Baron, and Vieyra 2018, 16).

Another risk that comes with increased transparency in the name of accountability is a decrease in the appetite for innovation. If administrations face a hostile media landscape or political pressure to paint over the challenges they face, an increase in the availability of data on what goes on inside government might stymie innovation. Public sector workers might face a reduction in their freedoms to think creatively and be entrepreneurial. They might be increasingly incentivized to manage to targets and targets only. Citizens would then face an inflexible administration without the capacity and incentive to adapt to changing needs. Thus, we return to the example of data dashboards: their availability must not distract from usability and explicability.

This chapter highlights explicability in particular because there is more demand for transparency regarding the algorithms and unsupervised machine-learning techniques used in public administration (Morley et al. 2020b). Making algorithms and code publicly available increases transparency, but it does not necessarily help citizens understand what they are confronting and how they can call for reform.

Increased data availability that supports accountability must incorporate qualitative aspects, lived experiences, and room for deliberation about what results mean for public service. Open government initiatives (such as the United Nations’ Open Government Data partnership and the World Bank’s Anti-corruption, Openness, Transparency, and Political Economy Global Solutions Group) and unilateral government efforts (such as the Open Knowledge Foundation) to make government data more accessible, explicable, and usable for a diverse group of stakeholders are good cases in point for how accountability can be at the center of data collection efforts.

### **Throughput**

*Throughput* describes behavior that “makes something happen.” This contrasts with plans, values, or ideals that relate to action but are not the actions that create the announced change. For instance, having a team of legal staff who regularly check contracts and account details to verify that employees with comparable skills and experience levels receive the same pay is the difference between having equal pay policies and providing throughput on them.

Where data concern the attitudes, opinions, and experiences of public sector staff, using these data for accountability promotion requires throughput. Surveying service providers (public sector workers in this case) or service users can make organizations appear considerate and proactive. However, if momentum and resources are lacking to enact change based on survey results, what is intended as an accountability mechanism can soon amount to window dressing. This is problematic in terms of monetary value—the time taken from staff and clients to answer surveys goes wasted—and in terms of trust in institutions. If accountability mechanisms are not used as promised, they can backfire. They can create mistrust, disengagement, and cynicism where they intended to foster trust, engagement, and optimism.

### **Unintended Consequences**

For public accountability, a government should know how much it spends on its workforce and who gets what. Many jurisdictions make the incomes of public sector employees public. The disclosure of salaries has propelled efforts to close gender disparities in pay (Marcal 2017). It might subsequently seem innocuous to track data on pay and incentives.

However, organizations typically know more than how much an employee earns. Many employers, particularly public sector employers, offer benefits such as health insurance and pension schemes, sometimes even bursaries for the educational and medical needs of employees’ families. From the types of pension and insurance arrangements chosen by an employee, an employer can easily see what types of health issues an employee might face and how many dependents profit from the employee’s benefits. This can create unintended breaches of privacy in the name of accountability.

For instance, while it is admirable that employers subsidize additional insurance schemes designed to cover extra costs associated with mental illness or cancer treatment, typically not covered by basic insurance packages, this also means that employers hold data on the mental and physical health of staff. Holding such data increases the risk associated with data breaches and data misuse. On top of the broad types of information on health an employer might glean from insurance choices, organizations that opt to provide their workforce with fitness trackers face an even more granular level of data and associated risk.

It can be argued that public sector employees can be subjected to greater levels of scrutiny, with more of their personal data accessible to public view, because they inhabit positions of power and the trade-off of privacy for power is just. We see such a trade-off with people who are considered to be public personas—politicians and celebrities—and it might not amount to overstepping to extend this category to include public sector employees. What is considered an infringement on privacy is, however, deeply embedded in social context and norms (Regan 2018). The dilemma created in this situation is that two sets of social norms are at odds: the belief that a person's address, name, income, and work activities should not be freely available for consultation on the internet versus the belief that this is justified when the individual belongs to the category of "public persona."

Navigating these dilemmas sustainably requires that, when individuals join social groups in which different norms on data privacy are applied, they do so knowingly and are provided with the opportunity to advocate to change these norms. In practice, this can mean giving public sector staff unions a voice in what data are made available about their members and what guarantees of accountability they can offer the public in place of such data.

## Innovation

Gaining an improved understanding of how public administrations perform is central to promoting evidence-based innovation. Promises of revolutionizing government via increased data collection, analysis, and insights abound. The World Bank released a report in early 2021 focused solely on the role of data in promoting growth and international development (World Bank 2021b).

In Indonesia, for instance, survey, census, administrative, and satellite data are being combined to help to plan infrastructure and improve urban sustainability (World Bank Data Team 2019). A report published in 2021 suggests that data on postal mail could be used to help stem drug smuggling and counterfeit trade (Shivakumar 2021). Furthermore, HR data were successfully used by Colonnelli, Prem, and Teso (2020) to capture patterns of politicized hiring and firing in the Brazilian public service. Election, media, and administrative and accountability data, such as scorecards, highlight where governments deliver on their promises of responsiveness and service delivery and where they lag behind (Brierley 2020; Erlich et al. 2021; Ingrams, Piotrowski, and Berliner 2020). The *Handbook* includes examples of how data on public administrators can help to create happier and more effective workplaces (chapters 1 and 2), flag malpractice (chapter 7), better assess the quality of government processes (chapter 13), and combat systemic institutional biases (chapter 20).<sup>2</sup>

## Welfare Consequentialism

In the context of data collection for public sector innovation, with a particular focus on data on the inner workings of government, ethical problems mainly surround two sets of questions. First are those concerned with welfare consequentialism. As outlined above, most public sector discourse stresses how data can be used for welfare gains through the alleviation of poverty, energy savings, or similar large-scale changes. Using such a logic, however, raises questions about *whose* benefit is targeted, who decides what is valuable, how valuable certain ends are, and whether, for a process to be considered ethical, evaluation should focus on actual or intended and expected consequences. Such concerns apply to the measurement of public administration as well as its outputs. It is commonplace in many countries for public sector employers to garner data on their recruits' police records, previous addresses (going back many years), social media accounts and public postings, credit scores, and other data as part of routine background checks in hiring

processes (see Erlam [2008] for a review of European and US law and practices regarding background checks). Is the end of all this data collection and consolidation a more effective recruitment process? Or are data sets routinely collected that impinge on officials' privacy but do not speak to their effectiveness?

Garnering insights for innovation will often require accumulating and linking data that have previously not been accumulated, linked, or analyzed in the same manner. Risks associated with this include the potential to breach the rights to privacy and confidentiality of individuals or employee groups. This can occur through poorly designed data collection, usage, and storage protocols, data breaches, or data vending strategies. The most defensible position to take for an evaluation of the morality of such data strategies in the public sector is one that defines what is morally right according to whether its *intended* as well as its *actual* consequences create good outcomes. In other words, systems should be designed with a view to preventing potential harm, and action plans should be available to mitigate or stop harmful actions when they are underway.

A case in point that highlights the need for a systems perspective on the intended and unintended consequences of using data for public sector innovation is the UK National Health Service (NHS). The NHS decided to sell individual and linked health data to third-party companies in order to use analytical skills outside government to help plan, forecast, and reform health care services. However, there have been doubts about whether the sale of data can be conducted in a way that prevents third parties from misusing these data—for instance, for marketing purposes (Rahman 2021; Rapp and Newman 2021; Rector 2021). It is also questionable whether, despite anonymizing details of the data (such as names and addresses), individuals and groups are protected from reidentification via triangulation with other data sources. Another example is provided by the departments of motor vehicles (DMVs) in the US states of Texas and Colorado, which sold service user data to commercial companies (New 2020; Whalen 2019). While the sale happened under the terms and conditions agreed to by service users, some of the sales were used for identity theft and document forgery by third parties who had legally acquired the data (Lieber 2020).

As these examples illustrate, while data protocols for the innovative use of public sector data will involve working with third sector parties, mission drift as much as the intentional misuse of data needs to be considered when designing data protocols. The examples also illustrate that the existence of rules and, in the case of the GDPR (which was still in force when the NHS data system was set up), the threat of high legal fines are not enough to guarantee that data systems generate usage patterns that can be widely accepted as ethical.

The most appealing solution to this problem in democratic contexts would be to involve service users and interested parties in working groups that are used to adapt systems. Apart from the hurdles inherent to all participatory approaches, such a solution faces the challenge that innovative uses of data more often than not involve new technologies, pregnant with new jargon to decipher. Creating data approaches for public sector innovation thus requires that time and resources be set aside to make the process explicable to those affected by it. This is no simple task because governments still face skills gaps in cutting-edge areas of information technology. In many instances, governments will need to rely on external expertise to develop and maintain the skills of their staff to implement data solutions that are ethically sound and secure.<sup>10</sup>

### ***Innovation and the Core Mandates of the Public Sector***

There is a danger that a greater push for data availability for innovation's sake will conflict with other demands on the public sector. Innovation in the short run can look unproductive: there are high costs and little immediate return.

Innovation and accountability can be at odds. For example, data on innovations related to defense, energy, and telecommunications infrastructures cannot be made readily available without weighing risks to national security. It is also unclear what rate of failure is acceptable for a public sector organization. Cost-benefit arguments that downweight the ethical risks associated with increased data collection and tracking efforts based on promises associated with the potential for public sector innovation should include such limitations in order not to overstate potential benefits.

This second set of concerns relates to how the imperative to innovate interacts with other core mandates of the public sector, such as enforcing rules, protecting fundamental rights, and stepping in where there are

market failures. Jordan (2014) postulates that the moral imperative for public servants to act within their assigned responsibilities is greater than the imperative for innovation, so that even when they willingly block innovation but stay within their assigned mandate, their guilt is limited. Such a claim becomes highly problematic as soon as we move outside a context where every group in society has equal access to enforcing accountability. Even in countries where electoral democracy flourishes, state institutions can be systematically biased against certain groups. Mere rule-following can then create significant welfare costs.

Over the last decade, the use of data-driven policing has provided many examples of how a genuine conviction to render public services more efficient and automatized can negatively affect swaths of society. Profiling algorithms have been shown, in some cases, to hide systematic discrimination deep inside their processing structures. In these situations, it is arguably more ethically acceptable for public servants to go out of their way to improve algorithms and change policing rather than block changes to the status quo because they do not fit their narrow job description.

When data collection for innovation concerns data on public servants themselves—colleagues, superiors, and supervisees—resistance to innovation seems equally misplaced. For instance, if public servants willfully hinder the collection of data on gender intended to promote gender-equitable hiring and promotion practices, they harm fellow citizens (their colleagues) by denying them access to services that other parts of government granted them, and they potentially harm society by obstructing reforms of the civil service that could help to improve society as a whole.

It should be noted that what is considered a transgression and what is considered part of a public servant's sphere of discretion is subject to debate—a debate that can be highly politicized. It would hence be most appropriate to revise Jordan's (2014) idea of a moral imperative to rule-following over innovation to a moral imperative to guard public welfare over rule-following, including directives related to innovation.

The age-old problem is that in the absence of rules and moral absolutes, the state apparatus needs to rely on the moral compasses of individuals and the norms reinforced by organizational culture to navigate toward the ethical delivery of public service. Appendix B therefore tries to provide a framework for public servants to evaluate new data approaches.

## CONCLUSION

While guides on research ethics abound, there is little guidance available for how ethical data collection, analysis, and innovation with data on public sector workers should take place. This chapter has attempted to provide such guidance via a heuristic that sees ethical challenges as falling broadly within three dimensions: an individual dimension, which comprises demands for dignity and privacy; a group dimension, which relates to voice and dissent; and a public-facing dimension, which ensures that data enable public administrators to deliver on public sector values. Each of these dimensions affords similar but also different prerogatives. The individual dimension calls for dignity and personal privacy, the group dimension relates to how data create and diminish voice, and the public-facing dimension concerns how data relate to public sector values. There is a wide range of values and considerations that can be framed as “public value.” This chapter has focused on three that are central to many discussions of public administration's effectiveness, efficiency, and measurement: productivity, accountability, and innovation. The section on productivity highlighted how important it is to choose metrics well and understand their strengths and biases (see more on this in sections 2 and 3 of the *Handbook*). The discussion of accountability presented the tensions in using data to increase the accountability of the public service by emphasizing explicability over mere transparency. The discussion of the tensions inherent to using data to create and measure innovation, as well as the delicate balance between accountability and innovation, showed that dialogue and regular reviews of the data strategies adopted by governments and researchers to measure public sector work and support innovation must be baked into the process to guard against delivering more to one value than another.



To make things more practical and support the reflective approach to measuring public sector work and employee effort, in appendix B we offer a framework that practitioners can use to build and review measurement strategies.

## NOTES

This chapter is indebted to extensive comments provided by Josh Cows (University of Oxford) and Johannes Himmelreich (Syracuse University) on dimensions of big data ethics and to Dan Rogger (World Bank) and Christian Schuster (University College London) on public administration and bureaucracy.

1. In the public sector, the right to individual dignity is curtailed by the public's right to dignity. This tension is explored in more detail further along in this chapter, in the section on the public dimension of data collection ethics.
2. For instance, in Qatar, 54 percent of the population is employed by the government. While employing half of the population is rare, employing 25–30 percent of the population is the norm in most middle-income and Western European countries. Data are from the International Labour Organization ILOSTAT “ILO modelled estimates database” (accessed January 2021), [ilostat.ilo.org/data](https://ilostat.ilo.org/data), via World Bank Open Data, “Employment in industry (% of total employment) (modeled ILO estimate),” World Bank, Washington, DC, <https://data.worldbank.org/indicator/SL.IND.EMPL.ZS?>
3. Action research is a form of research that uses mostly qualitative methodologies but can also involve the creation of survey questionnaires and the scales used to quantify responses. It is defined by an emphasis on making research participatory—involving the subjects of research and data collection actively in all stages of the research process, from defining the research question and the parameters of data collection to the use of data and results (for a more in-depth explanation, see, for example, Brydon-Miller, Greenwood, and Maguire 2003).
4. Note that *citizens* here is meant also to encompass persons without formal claims to citizenship who are government service users or fall within the jurisdiction of the government.
5. The theory being that these children perform worse typically as they struggle to fit in and potentially face discrimination. Minority teachers are hypothesized to be more cognizant of these problems and to create an atmosphere that is more inclusive and nurturing for minority pupils.
6. This dilemma, dubbed the “principal-agent problem,” has been widely discussed and is still researched in a variety of ways in economics, political science, and public administration.
7. For example, in some contexts, it has been demonstrated that political control over the bureaucracy increases instances of corruption and other malpractice (Brierley 2020), while in others, it can improve practices (Raffler 2020).
8. Lavertu (2016) sees an active role for public administration scholars in contextualizing, revising, and creating metrics to provide a more holistic assessment of public sector performance, in order to prevent misguided intervention by political and citizen principals.
9. As alluded to in earlier sections, a lot of rhetoric on public sector reform invokes an imperative to innovate. The underlying assumption is usually consequentialist: innovation will create benefits; therefore, it is good. Public sector innovation's merit can also be framed in terms of the collective virtue of creativity, an endeavor that is intrinsically worth pursuing, and extending it via a hedonistic logic, for the positive life experiences it can create.
10. Some governments have already developed schemes to encourage skills transfer into the government from outside for innovative practices. For example, Latvia runs a “shadow an entrepreneur” program, as part of which civil servants learn from private and third sector entrepreneurs about new developments in tech (OECD OPSI 2020).

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