

The Ethics of Measuring Public Administration

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Abstract

As the use of data collection *within* government *on* government becomes more prevalent, there is a need for review of research and data ethics, fit for use within public administrations. While guides for public sector employees and use of data on citizens exist, there is a dearth of discussion and practical guides on the ethics of data collection by government on its own employees. As a heuristic, ethical considerations facing public administrations when collecting data on their employees can be seen as having to balance three dimensions: (i) an individual dimension which comprises demands for dignity and privacy, (ii) a group dimension which relates to allowing for voice and dissent, and (iii) a public-facing dimension which ensures that analytics enable public administrators to deliver on public sector values - accountability, productivity and innovation. The chapter uses this heuristic to investigate ethical questions and to develop a 10-point framework for governments to guide the creation of fair and equitable data collection approaches.

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Lessons for Practice

Collecting data on government employees involves challenges different from and additional to collecting data on service users and private sector employees.

Depriving public sector employees of privacy can erode democratic principles as they lose spaces where they can dissent and counter-act malpractices 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, creating ways of collecting data that enhance dignity can help to move away from zero sum game thinking. If public sector employees can gain dignity from data collection they are unlikely to see it as an unwanted intrusion. For instance, data could be collected that celebrates bureaucrats for taking personal initiative, good management practices and outstanding achievements; as opposed to solely focusing on disciplining uses of newly collected data such as identifying malpractices or inefficiencies. In some cases, employers might also consider opting to disclose identities of participating individuals if they consent to do so to highlight valuable contributions and give credit (see also Israel (2015) for case studies of how this is typically done in sociological and anthropological research to acknowledge the role that research participants play in scientific discovery).

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 thus must tread carefully in order to guard against setting up data infrastructures that can be used to the detriment of public sector employees.

Despite improved data quality helping to produce efficiencies, value-based decision-making will not become obsolete. A negotiation of values is required as much as ever to produce evidence-based and ethically sound policy (Athey, 2017).

Navigating such dilemmas sustainably requires individuals who join social groups for whom different norms on data privacy are applied to do so knowingly and to be provided with the opportunity to advocate on their own behalf to change these norms. In practice this could be exemplified by giving public sector staff unions a voice in what data can be made available about their members and what guarantees for accountability they can offer the public in the absence of such data.

Creating data approaches for public sector innovation thus requires that time and resources are set aside to make the process explicable to those affected by them. This is no simple task as governments still face skill gaps in cutting edge areas of information technology. In many instances, government will need to rely on external expertise to develop and maintain skills of their staff to implement data solutions that are ethically sound and secure.

What is considered as ethical and morally right can be very context-dependent. There are however questions that provide general guidance on how measurement can be conducted in an ethically sound manner if asked regularly at key junctures of data collection, analysis and reporting.

- It is important to construct objective measures of organizational performance and/or individual performance rather than only relying 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.
- The measures of performance for public-sector organizations will depend on the specific context of study and data availability but they should reflect both the *volumes* of services provided as well as their *quality*.

1 Introduction

Data from Latin *datum*, meaning *given*, is the embodiment of something factual, technical, value-free. Yet, data is more than that. It is considered to have monetary worth and create monetary worth: “Data is the new capital” has become the catch-phrase of the 21st century as its importance in value-generation has increased. Data is central to the business model of most of the leading Fortune 500 companies (Wang, 2012; MIT Technology Review, 2016). Its potential for poverty alleviation, growth and development has been recognised. For instance, the World Bank’s Data, Digitalization, and Governance report makes “data” centre-stage (of the Chief Economist, 2021). Several governments have already demonstrated how they can use data to provide better services and protections to their citizens (UN Data Revolution, 2014; of the Chief Economist, 2021). Collecting data on people who work in government has become part of the quest of using metrics to improve government service delivery (see Table 1.1 for an overview of types of data that governments can collect on their workforce, examples of how they can contribute to a mission of service improvement and what ethical threats they entail.).

Parallel to the increase in awareness of data being a source of value creation, greater attention is being paid to how rendering of observations into data is reliant on structures of power and value trade-offs. Over the last decade, public debate on the ethics of the use of data has become a fixture of global news with most articles focusing on the use of consumer data (Fung, 2019; BBC, 2019; Bala, 2021; Pamuk and Lewis, Pamuk and Lewis), some on government’s use of data on citizens (e.g. (of the Chief Economist, 2021; Beioley, 2022a; Williams, 2022, p.5), and some on how companies use data on their employees (Hunter, Hunter; ??, FTe; Reu, 2021; Beioley, 2022b). The intersection of the last two - attention to the use of data by governments on their own employees - has received next to no attention. Likely reasons are that governments are only starting to catch up on the use of employment and within-government metrics and that 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 analysed - can become capital, commodity, truth or all at once. Especially data’s function

as truth distinguishes it from other resources that have shaped world economies over the last centuries. Neither gold, nor oil nor 5G have inherent to them that their value is tied to what they say about human behaviour and the world we live in. In that sense, data and its use raises ethical conundrums not seen before in other phases of technological adoption.

Data linkage and triangulation offers 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 a greater argument for reliance on indicators. See the discussion in Chapter QUALI of this Handbook. Choosing those indicators means making choices about what to make salient in an officials work environment.

Guides for ethical data use for both private and public sectors now exist in many jurisdictions (OECD, 2019; Institute, 2021; Mehr et al., 2017; Morley et al., 2020; for Science, 2020). Guidelines for the public sector tend to be heavily modelled on those for the private sector, meaning that they mostly speak to data interactions between government and public service users. There are however significant amounts of data that concern processes and people within government. Collecting data on government employees involves challenges different from and additional to collecting data on service users and private sector employees (see Table 1.1 for an overview). The ethics of collecting data on government sector employees thus merit separate discussion.

This chapter uses the terms “government employee”, “public sector employee” and “civil servant” interchangeably. The majority of concerns discussed here are relevant for 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 type of public sector employment and 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 favour of providing more space for discussion of how ethical data collection can be put into practice in the public sector.

1.1 Data and public value

What can be considered 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) eschew the elusiveness of defining public value by ascribing the task to public

Table 1: Types of data collected on public administrations: examples

Type of data collected on public sector employees	Examples
Pre-hiring metrics	qualifications, work experience, gender, age, ethnicity, sexual orientation, disability
Recruitment metrics	test / 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 behaviours, practices
Linked data	survey + admin. data, survey + geospatial data, admin. + geospatial data

managers and their interactions, or perhaps better-termed negotiations, with political and societal agents (Rhodes and Wanna, 2007). Deborah Stone’s work (Stone, 2002) on public value highlights ideas 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.

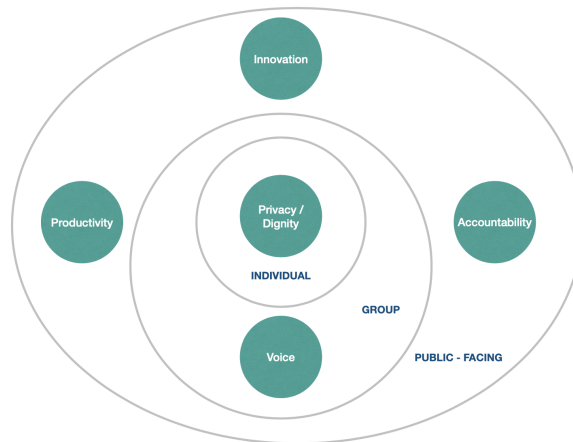
For a working definition of public value that serves the debate about data use on government employees, this chapter will zoom in on three broad aspects of public sector endeavours that can produce public value by producing goods and supporting equitable information exchanges between the governed and the governing - accountability, productivity and innovation (see Figure 1).

Accountability is chosen as it is central to ethical exchanges between citizens and governments and employers and employees. Productivity is the second concept of focus as this chapter is looking at the creation of public value in the sense of government output. Innovation is discussed next as concerns about public value creation are not limited to what is produced but, particularly in the context of big data and artificial intelligence, whether data used for public value creation can also produce innovation in the form of creating improvements or all-together 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 developments metrics (see Table 1.1 for an overview).

1.2 The three dimensions of public sector data ethics

As a heuristic, ethical considerations facing public administrations when collecting data on their employees can be seen as having to balance three dimensions: (i) an individual dimension which comprises demands for dignity and privacy,

Figure 1: Ethical dimensions that require balancing in data collection efforts on public sector employees



As a heuristic to facilitate discussion about key questions pertaining to the ethics of collecting data on public sector employees, one can imagine them as falling into three spheres. The inner circle describes the individual dimension. This concerns mainly questions of privacy and dignity of the individual public sector employee. The middle circle signifies the group dimension. This dimension concerns issues to do with how ethical questions change when they move from the individual to the group level. Discussions mostly focus on the question of voice, which is central to many functions that public sector employees occupy and the tensions that arise when collecting data on them as groups. The third, most outer sphere encapsulates questions that relate to qualities that define public sector value creation in their relation to stakeholders: political principals, public service users and society at large.

(ii) a group dimension which relates to allowing for voice and dissent, and (iii) a public-facing dimension which ensures that data enable public administrators to deliver on public sector values.

The individual dimension: individual dignity and privacy

The first dimension of ethical concerns for employees - individual demands for dignity and privacy - has been discussed widely in standard volumes on research ethics, while the other two tranches have received less attention (Carpenter, 2017; Macdonald, 2017). The first dimension however still merits discussion as owing to their unique position in politico-economic systems, public sector employees face a different set of demands, incentives, threats and opportunities compared to 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 non-profit sector. This has implications for informed consent. Employees might accept trade-offs because of the constrained choice sets they face as opposed to what satisfies their needs for privacy and dignity.

The temporal and spatial dimension of how data on employees is safeguarded also differs from that found in the private sector. What is considered “good public service” and “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 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 organisations are run. For example, state-owned enterprises do not only exist to deliver services where market failures exist but are also used as serving as model employers (e.g. pioneering inclusive hiring practices), symbols of national identity (e.g. airlines, national health services) and can be used to play a redistributive function (e.g. providing subsidised 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). With what aim data is collected on individuals and groups in the public sector might thus change differently over time compared to the private sector. While in the private sector the main threat to companies recognising the value of workers is automation. When it comes to public sector employment however some political

factions believe that many services and functions should not be performed by the public sector at all or if they do not go this far, they have deep-seated mistrust against civil servants. As a case in point, remote and flexible working have become standards in many industries. Because of competition between 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 UK suggests that private and public sector workers are absent for less days in a year compared to public sector workers. This data and supposedly empty seats (due to remote working) in government halls, led political leaders of the UK conservative party to campaign for remote working policies to be curtailed (ONS, 2022; UKc, 2022; BBC, 2021; Lynn, Lynn). How data on public sector workers is collected and used might change more with the political flavour of the day than what is considered industry standard or suggested best practice in other fields.

The group dimension: voice and representation

The second dimension (group) becomes relevant in a setting where data relates to existing or ad-hoc created groups of employees. The group dimension recognises that employees as a group have a right to provide feedback and criticism, with a view to actively shape what is to be done on them: they have a right to exercise voice.

Hirschman (1970) first introduced the concept of *voice* alongside *exit* and *loyalty* as defining the dynamics of engagement with institutions. Voice in this sense is defined as expression of opinions and thoughts in a manner that is impactful or at least has the potential of being impactful. Denying stakeholders the option of voice makes exit more likely, which in an organisational setting equates to disengagement with the cause or leaving the organisation. Voice is thus both 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, p. 776). There is a need for civil servants to have space to speak up, take initiative, disagree and innovate.

On the other hand, for organisational goals to be attained, 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

organisations, where adherence to mission is an important guide to action and motivator for public servants as a whole. Voice may place individuals or groups in the position of identifying themselves as in defiance of, or 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 a civil servant is that they implement directives from democratically elected or appointed political leaders. Civil servants thus need to subordinate some of their own concerns to what policies elected representatives choose. Such need for sub-ordination can be demanded more easily when it pertains to individual civil servants. However, when voice is exercised on behalf of groups - e.g. women, ethnic minorities, people with disabilities in the civil service - the 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 the service of the public

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

Challenges located within this third dimension include balancing requirements for data security, openness for innovation, room for experimentation as much as certainty, consistency, accountability and reliability of public service. While not necessarily mutually exclusive, these demands create tricky trade-offs. For instance, making data available on what public sector workers do 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, political suppression and encourage inflexibility.

The following sections will discuss each ethical dimension in turn: Each first outlines specific demands and incentives facing public sector employees before discussing how data can help to address ethical challenges and where it introduces new challenges that require closer scrutiny. The chapter then concludes with a framework for evaluating the ethics of measuring and tracking

public sector workers. The intention is that practitioners can use this framework to think through the key tensions laid out in this chapter.

2 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 alike (Solove, 2008, pp.1-25) are concepts that have caused controversy as they are complex and potentially tautological at times. Dignity in this chapter is employed in the sense that humans - or in the specific case here, public sector employees - have a worth in and of themselves which *they themselves* can define. This stands in contrast to seeing them as *means* to effect government outputs and to *ascribing to them what comprises 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 is collected should be central to the design of research efforts. Even if, for instance, people who design employee webpages decide that it is nice to show pictures of staff, an individual employee should be allowed to have their picture 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.¹

Privacy as it is used in this chapter does not equate to 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 as what was internal and possibly unknown to others is now known to others. Why such a strict definition of privacy is adopted in this chapter becomes clear when discussing group-level dimensions 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 in this case - matters about their thoughts, behaviours or environs become knowledge to persons other than the very members of this group. Discussions of *individual* privacy, the focal point of this section of the chapter, must therefore

¹In the public sector, this 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.

be separated from discussions of *collective* privacy which will be discussed in later sections of the chapter.

Related, privacy as utilised here is understood in terms of a “typology of disruptions” (Solove, 2008), which acknowledges that the definition of privacy is highly contextual. Similar to how quirks distinguish themselves from mental health disorders, disclosure, transparency and openness distinguish themselves from infringements on privacy by the disruption they cause. Does one only occasionally need to return home to check whether one left the stove on, or is it a daily re-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 that the phone numbers of inhabitants of entire cities were listed, publicly available in white pages or equivalent forms of phone and address directories. In several Scandinavian countries it is still the case that all resident’s social security number, address and taxable income is made publicly available. The key difference is to what extent something is experienced as a disruption as opposed to being the norm, and to what extent people can stop the 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 laws surrounding the publication of details. How employees, particularly state employees of whom transparency is expected, can demand change when they find practices intrusive is less clear.

Privacy in how it is 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 to their private as opposed to their professional (work) persona*.

Commonly, informed consent procedures serve to preserve dignity as they afford the individual the opportunity to ascertain what they see as acceptable in how they or their data is handled. Informed consent predicates that individuals on whom data is collected or who are asked to divulge information are fully informed about the purpose of the research, how their data is handled and how it will be used. Even when they agreed at an earlier stage, these 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 is little in the way of options for public officials to opt out of service-wide databases.

To what extent informed consent is *de facto* voluntary is important. In

situations of near employer monopoly² 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 on them because they see little other choice. 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 it timely and accurately, one is likely to accept the data usage conditions that come with this service. The viability of informed consent is intricately bound to the existence of being able 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 Resource managers. Any form of data collection on individuals will require some abnegation of privacy. Research ethics typically try to acknowledge this right by providing confidentiality: a declaration that information disclosed to the data collector is limited to be known and used to a pre-identified set of people. In the public sector, this will for example be the case when an internal research or strategy unit collects survey responses from civil servants with a view to sharing it with HR and finance operations to improve planning, staffing and training.

The principle of confidentiality in research brings to mind that research ethics have their foundations in the hypocratic oath and bioethics. A patient would trust their doctor to share their medical information and concerns only with relevant personnel, all 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 part of interactions. We do so willingly because disclosing information encourages reciprocity, building of trust and can help to 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 trade-offs against interests of large corporations or government. As discussed above, this is particularly true where an individual would like to exercise exit or voice when the options presented to them do not inspire trust.

In response, legal protections have come into place to guard against the

²For instance, in Qatar 54% of the population are employed by the government (Data, 2021). While employing half of the population is rare, employing 25-30% of the population is the norm in most middle-income and Western European countries (ibid.).

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 is collected, how it is handled and who has access to it. California, Virginia, New Zealand, Brazil, India, Singapore and Thailand all have implemented legislation similar to the GDPR in recent years. However, detailing how data is 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 such consent processes introduce implies that most of us have become accustomed to quickly clicking through consent forms, terms and conditions and other commonly encountered digital consent procedures. This means that in practice consent is either (i) based on trust rather than complete knowledge, or in the face of a lack of exit and voice options, (ii) consent 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 on 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 can therefore not offer a comprehensive account of the debate. Instead, it focuses three areas that likely cover concerns that will arise for someone wanting to collect data on civil servants: (i) trade-offs surrounding access, transparency and privacy, (ii) how data collection can be designed to enhance dignity and (iii) 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 behaviour and attitudes is in the public interest. For example, using data to identify the passive or active waste 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 for consent to be lifted if there is a strong case for public interest. These waiver clauses tend to justify unequal power relations as grounds for the lifting of consent requirements: Researchers might be prevented from gaining access to public institutions as 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 of privacy and overruling of informed consent can thus promote *accountability*. It can also enhance *transparency*. Having more in-depth knowledge of the behaviour of government employees can help to increase government transparency: similar to how the work of election volunteers had been 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 whereby 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 et al., 2017; Mohan et al., 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, what promotes one type of public good might infringe on another (similar to discussions of contradicting policy choices discussed by Stone (2002)). Privacy is instrumental to guarding collective freedom of speech and freedoms of association (Regan, 2000). Depriving public sector employees of privacy can erode democratic principles as they lose spaces where they can dissent and counter-act malpractices pursued by powerful colleagues, managers or political principals. To date, the ambiguity of claims to public interest is most commonly revealed in cases of whistleblowing (Wright, 1988; Boot, 2020): government whistleblowers often endanger some public interests (e.g. national security) in favour of others (e.g. transparency). How convoluted claims to public interest can become is then also highlighted when whistleblowers reveal previously private details of some actors in the claim of public interest (e.g. disclosing that a particular person had been at a particular location at a particular time or making public private communication between individuals), while the privacy of the whistleblower needs to be protected in order to shelter them from unfair

prosecution and attacks, so that future whistleblower 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 thought to be private before “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 protection of privacy in the public interest, a society must protect fora and institutions that publicise such issues, involve powerful stakeholders and have tools at their disposal to enforce recommendations. To date, this most often means supporting the capacities and ability of media, civil society, political opposition and the judiciary to fulfill these functions. For the researcher and governments thinking about collecting data on government employees, they 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 publicise 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 organisations 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 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, creating ways of collecting data that enhance dignity can help to move away from zero sum game thinking. If public sector employees can gain dignity from data collection they are unlikely to see it as an unwanted intrusion. For instance, data could be collected that celebrates bureaucrats for taking personal initiative, good management practices and outstanding achievements; as opposed to solely focusing on disciplining uses of newly collected data such as identifying malpractices or inefficiencies. In some cases, employers might also

consider opting to disclose identities of participating individuals if they consent to do so to highlight valuable contributions and give credit (see also Israel (2015) for case studies of how this is typically done in sociological and anthropological research to acknowledge the role that research participants play in scientific discovery).

Apart from a normative view of why data collection efforts should be dignity-enhancing, there are clear utilitarian reasons: It 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 on claims of public interest 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 should have an additional incentive to do so as the validity of responses and response rates will likely deteriorate when staff sees that data on them is not used to their benefit.

They will be more likely to develop trust in the process and engagement with results when they have a stake in developing research questions and actions plans following up on results. Principles used by action research ³ that build in phases of review, consultation and revision in the research process could help to create data collection strategies on public sector employees that enhance dignity of involved individuals.

Designing data transfer and storage to guard dignity and privacy

Both dignity and privacy are at risk when data is not secure. Cyber attacks are becoming more common. For example, in 2021 the Washington D.C. 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).

³Action research is a form of research which mostly uses qualitative methodologies but can also involve the creation of survey questionnaires and 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 parameters of data collection to the use of data and results (for a more in-depth explanation see for example Brydon-Miller et al. (2003)).

In 2015, the Office of Personnel Management (OPM) of the U.S. Federal Government was subject to a hack that led to the leaking of personal data of millions of employees, many who suffered from identity theft for years following the data breach (CBS, 2015).

Guarding dignity and privacy in this sense are as much a technical as a moral issue. Legal frameworks such as the EU’s General Data Protection Guidance (GDPR) and related frameworks have been created with this in mind. Several international best practice guides on data protection further elaborate on the technicalities of such efforts. Good examples include sections on data protection in the World Bank’s DIME Analytics Data Handbook “Development Research in Practice” and the OECD’s “Guidelines Governing the Protection of Privacy and Transborder Flows of Personal Data (the “Privacy Guidelines”)”.

As the sections so far reviewed, there are many aspects of data collection that affect government employees as individuals. These are perhaps most comparable with 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 groups within the public sector that can be created based on observable characteristics or self-elected labels.

3 Group level: Voice and dissent

The concept of voice - alongside exit and loyalty - was coined by Hirschman (1970). In the public sector context, voice amounts to the ability of employees to express opinions and for these expressions to have the potential 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 conceptualised as part of the job of civil servants. For instance the UK’s Civil Service Code demands from public administrators that they “provide information and advice, including advice to ministers, on the basis of the evidence, and accurately present the options and facts” and that they “must not ignore inconvenient facts or relevant considerations when providing advice or making decisions” (UK Government Civil Service, 2015). Voice in this function is mainly intended to enable elected officials to deliver on their policy programmes. If however elected officials endanger public sector values and the integrity of rule-based and meritocratic government institutions, a professionalised bureaucracy is expected to exercise voice

to counteract such erosion. This can take place as an exercise of voice within legitimate remits of voice and discretion (Miller and Whitford, 2016), or in the form of dissent (Kenny, 2019).

Demands for voice are intricately linked with those for productivity and innovation. In organisational studies, it has long been established that psychological safety - a feeling that an employee can voice ideas and concerns without facing an immediate threat to their job or self - is necessary for innovation and sustainable increases in organisational performance (Baer and Frese, 2003; Nembrand 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 conceptualised as civil servants representing the interests of the demographic groups to which they belong - a kind of passive voice. It is theorised that they do so through their increased attention to these groups' needs and a heightened awareness of how to design and deliver public services to address them (summarised under theories of representative bureaucracy - see Kingsley, 1944; Meier, 2019).

Data on civil servants can help to promote or curtail voice, in its active and passive form. In its passive form it can showcase how certain groups (for instance, women or bodily disabled people) are affected by or think differently about certain employment policies. In its active form, data can be used by the groups to raise issues themselves: for example, if the number of bullying or sexual harassment complaints filed by department or a government sub-division is made public it helps victims to understand that their case 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 raises ontological and utilitarian questions. The former relate to how data can define groups and how groups can use data to define their workplace, work and position between political principals and citizens⁴. The latter concern how risks and benefits of using data relate to attempts to improve working conditions and service delivery in a way that is responsive to needs and wants of groups that become apparent through the group-level aggregation of data.

⁴Note that citizens here is meant to also encompass persons without formal claims to citizenship that are government service users or fall within the jurisdiction of the government.

Assigning group labels to individuals implies that their individual rights and identities are being 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, p.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 used as a vehicle to ensure an alignment of grouping with a personal preference to do so. For instance, in surveys civil servants can opt out of providing demographic details. However, for most data collection efforts of administrative data, the use of consent is limited or wholly unfeasible. Employees might be grouped together as “fit for early retirement” or a target group for “offering overseas posting” because of their age, gender, tenure, family situation and other administrative data available to other administrators. These groupings 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 leading to wrong conclusions. The availability and increasing richness of data available on groups thus cannot substitute meaningful engagement with them. Such arguments are touched on in chapter QUAL.

The creation of groups and pegging data to group labels does not only create risks, it also holds immense positive power. Data can open up avenues for voice as it showcases where differences between groups exist. For instance, in 2014 the cross-organisational initiative Data2X started a global drive for an increase in the collection and use of data on women and gender-disaggregated data. The initiative has helped to increase women’s access to finance, meaningful work and significantly reduce maternal mortality rates (Grantham, 2020). In the context of collecting data on public sector employees, data can help to better understand issues such as the proportionality of representation of groups in different positions and sections (e.g. *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 skill gaps (e.g. *Are there enough people with advanced IT or data analysis skills in each department?*); or spotting management problems in part of the civil service (e.g. *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 data collection and use on public sector employees requires moving beyond acknowledging how data shapes realities to discussing how risks and benefits created by this process can be negotiated.

Data can catalyze employee voice by giving groups a platform to assess metrics pertaining to their group compared to relevant benchmarks.

For instance, detailed employee data including demographic details can help to understand what predicts turnover and whether certain staff - ethnic minorities, women, people with care responsibilities - can be retained as well as others (Grissom et al., 2016). Where performance data is 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, 2021).⁵ Data disaggregated by groups can also help to provide better access for training and career progression for public sector employees.

As Viswanath (2020) notes, data equity in terms of knowing about what ranks people from different sections of society can attain in public service is critical to provide better service (in line with theories of representative bureaucracy) but also to provide more 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 et al., 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, improved pay equality across a large section of society.

At the same time, the availability of data is no guarantee for safeguarding the rights of minority groups and promoting 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 can equally enable them to weed out people who are deemed less desirable. Such weeding could be based on demographic details, but increasingly also founded in what potential employees say online. Hiring man-

⁵The theory being that these children perform worse typically as they struggle to fit in and potentially face discrimination. Minority teachers are hypothesised to be more cognisant of these problems and to create an atmosphere that is more inclusive and nurturing for minority pupils.

agers can easily introduce bias into the hiring process if the recruitment process is not sufficiently anonymised. For instance, it might be important to collect data on which universities applicants attended. This data can however also be used by hiring managers to pre-screen 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 the applicants 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 to post online or have an online presence that can be linked to their identity, in fear of potential discrimination in the form of current employment and future employment opportunities (Cooper, 2020a,b). In some government contexts, there is the danger that governments collect information on employee opinions systematically. This is not only problematic at the individual but also 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 et al., 2016, p.46). In a public sector context, such information could be used to map out political affiliations of employees. Other administrative data could be used for targeting based on religion or personal circumstances. For instance, data scholars showed that people could be identified as devout Muslims by mapping out their work break schedules over a year (Taylor et al., 2016, p.49).

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 thus must tread carefully in order to guard against setting up data infrastructures that can be used to the detriment of public sector employees.

4 System level: Productivity, accountability and innovation

Moving on from the group dimensions of ethical concerns relating to data collection on public sector employees, the chapter discusses the most unique 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 typically 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 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 maximising actions, the next section will discuss ethics surrounding data collection for the common good together with those aimed at increasing productivity.

4.1 Productivity

Public sector workers are meant to maximise productivity in the service of the public, in response to their political principal's directives and accountable to a diverse group of societal stakeholders. In the 21st century, execution is not enough; public sector employees are also expected to do so as efficiently as possible. They are expected to maximise 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 a common social good).

This is not guaranteed.⁶ Public sector workers have a lot of room to divert from what might be considered a 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 for the public sector to be more flexible and responsive which requires awarding more discretion to public sector workers.

Public sector productivity is difficult to measure as 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

⁶This 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.

as the services are supplied by 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 and 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 data on process, project- and task-completion rates, staff and user satisfaction, 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) illustrates 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 (e.g. fire and food safety) more efficiently. Data can help to promote meritocracy where it identifies bottlenecks and resource deficiencies. If data is used to address resource inequalities, it can help public sector workers be productive.

Nehf (2003) uses the term “mischaracterisation as harm” to summarise what lies at the core of ethical problems related to measuring productivity in the public sector: The imperfections of measurement can create misjudgements that can be harmful to the dignity of individuals and groups described by it as much as they can cause more tangible social harm. For instance, when productivity is measured without an appropriate awareness of epistemological challenges, it can encourage management to targets. In the context of education, this can lead to grade inflation (De Witte et al., 2014; Hernández-Julián and Looney, 2016). In health care, it has been linked to under-investment in preventative care (Gubb, 2009; Bevan, 2009).

Problems with construct validity could unfairly sideline certain groups. For instance, the amount of sick leave taken and over-time logged are not necessarily good measures of productivity, skill or work effort. If an employee struggles with their health, it would infringe on their dignity to equate sick leave with a lack of motivation or commitment to organisational 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 on what is productive for many job roles in the public sector - or perhaps agreement that there is no clear definition - risks that measurement undermines principles of meritocracy. Public services whose productivity is hard to measure might get de-funded relative to those where 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. The reason for this seems to be connected to a lack of adequate data on skill matches and an ability of managers 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, micro-data can also help to see where public sector employees might engage in corrupt practices. It 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 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 in between data capabilities and their possible positive effects on public sector productivity and how ethically public sector personnel are treated.

As discussed in Chapter QUALI, effective validation and benchmarking exercises can help to create meaningful and ethically sound measurement of public administration. What the QUALI chapter argued was 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 is used ethically and justly. Enabling stakeholders to provide checks and balances against data misuse and opportunities for review (see framework proposed in the latter part of this chapter) remains key.

Epistemological and practical problems are here to stay. Epistemologically, it is questionable what is defined as productive. This includes questions ranging from the definitions of core work tasks, what makes an externality and 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 for quality of care, but neither speak to the dig-

nity with which service users are treated - arguably an attribute that should be central to public service. Despite improved data quality helping to produce efficiencies, value-based decision-making will not become obsolete. A negotiation of values is required as much as ever to produce evidence-based and ethically sound policy (Athey, 2017).

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.

4.2 Accountability

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 clients of their services, members of the communities in which their services or policy actions take effect and organisational stakeholders such as firms and civil society organisations 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 specialisation require that public administrators are provided with discretion. Theory and empirical evidence suggest that political control over the bureaucracy is not a sufficient lever for accountability (Gailmard, 2002; Weingast and Moran, 1983; Meier et al., 1991; Keiser and Soss, 1998; White et al., 2015; Raffler, 2016; Brierley, 2020).⁷

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 scrutinised 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 change of policy (Dahl, 1998). Bureaucratic accountability also requires transparency and explicability.⁸ As data becomes more widely available it becomes easier for experts, civil society groups and other stakeholders to scrutinise how well government

⁷For example, in some contexts, political control over the bureaucracy has been demonstrated to increase instances of corruption and other malpractice (Brierley, 2020) while in others, it can improve practices (Raffler, 2016).

⁸Lavertu (2016) sees an active role for public administration scholars in contextualising, revising and creating metrics with the goal to provide for a more holistic assessment of public sector performance, in order to prevent misguided intervention through political and citizen principals.

delivers on providing social goods. Data on the public sector and civil service thus plays 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 centre around (i) the difference between transparency and explicability; (ii) concerns surrounding throughput; and, (iii) the risk of causing unacceptable negative outcomes unintentionally as a result of data management solely focused on external accountability. Such risks require circumspect creation of data infrastructure.

Data ethics and explicability

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

As a case in point where this is relevant for public services: Data dashboards that summarise progress on targets for staff and public are increasingly adopted by governments across the globe. They are an example how data can provide an easy mechanism that encourages transparency for accountability. For example, dashboards can be used by citizens to monitor progress of attempts of city governments to improve transport systems as they make visible live traffic data, problems, government intervention and response times (Matheus et al., 2020). It is however important to bear in mind that like any technological fix, dashboards are no panacea for increased accountability (Matheus et al., 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 needs to be able 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

project which is a “regional initiative, 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 et al., 2018, p.23). As an evaluation suggested, the project successfully decreased the time taken to start and complete infrastructure projects. Those that had their details and progress published via the platform fared better than those that did not (Kahn et al., 2018, p.16).

Another risk that comes with increased transparency in the name of accountability can be a decrease in appetite for innovation. If an administration faces a hostile media landscape or there exists political pressure for administrations to paint over 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 incentivised to manage to targets and targets only. Citizens then face an inflexible administration without the capacity and incentive to change to adapting needs. Thus, to return to the example of data dashboards: their the availability of must not distract from usability and explicability.

Explicability has been highlighted in particular as there is more demand for transparency on algorithms and unsupervised machine learning techniques used in public administration (Morley et al., 2020a,b). Making algorithms and code publicly available increases transparency, yet it does not necessarily help citizens to understand with what they are faced and how they can call for reform.

Increased data availability that supports accountability needs to incorporate qualitative aspects, lived experiences and room for deliberation about what results mean for public service. Open government initiatives such as the UN Open Data Partnership, the World Bank’s Open Government Global Solutions Group and unilateral government efforts such as the 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 centre of data collection efforts.

Throughput

Throughput as it is used here describes behaviour that “makes something happen”. This contrasts with plans, values or ideals that relate to actions 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 whether employees with comparable skills and experience levels receive the same pay would be the difference between having equal pay policies and providing throughput on them.

Where data concerns the attitudes, opinions and experiences of public sector staff, using such data for accountability promotion requires throughput. Surveying providers of services (public sector workers in this case) or service users can make organisations appear considerate and pro-active. 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 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, organisations typically do not only know about how much an employee earns. Many employers, and that is particularly the case for public sector employers, offer benefits such as health insurance and pension schemes, sometimes even bursaries for educational and medical needs of their 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 their benefits. This can create unintended breaches of privacy in the name of accountability.

For instance, while it is admirable that employers might subsidise additional insurance schemes designed to specifically cover extra costs associated with mental illness or cancer treatment, typically not covered by basic insurance packages, this also means that employers somewhere 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, organisations that opt to provide their workforce with fitness trackers face an even more granular level of data and associated risk.

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

Navigating such dilemmas sustainably requires individuals who join social groups for whom different norms on data privacy are applied to do so knowingly and to be provided with the opportunity to advocate on their own behalf to change these norms. In practice this could be exemplified by giving public sector staff unions a voice in what data can be made available about their members and what guarantees for accountability they can offer the public in the absence of such data.

4.3 Innovation

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

In Indonesia, for instance, survey, census, administrative and satellite data are being combined to help to plan infrastructure and improve urban sustainability 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). Another example - Human Resource Data was successfully used by Colonnelli et al. (2020) to capture patterns of politicised 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; Ingrams et al., 2020; Erlich et al., 2021). This volume includes examples of how data on public administrators can help to create happier and more effective work places (Chapters 1 , 2), flag malpractices (Chapter 7), better assess the quality of government processes (Chapter 10) and combat systemic institutional biases (Chapter 21).⁹

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 surround mainly two questions: First, there are those concerned with welfare consequentialism. As outlined above, most public sector discourse stresses how data can be used for welfare gains through alleviation of poverty, energy savings or similar large scale changes. Using such a logic however raises questions of *whose* benefit is targeted, who decides what is valuable and how valuable certain ends are and whether for the 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 that public sector employers 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 (2007) for a review of European and U.S. law and practices of background checks). Is the end of all this data collection and consolidation a more effective recruitment process? Or are there data sets routinely collected that impinge on an official's privacy but not on their effectiveness?

Garnering insights for innovation will often require accumulating and linking data that has previously not been accumulated, linked or analysed in the same manner. Risks associated with this include the potential to breach 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

⁹As 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 a collective virtue of creativity, an endeavour that is worth pursuing for its intrinsic worth, and extending it into a hedonistic logic, for the positive life experiences it can create.

an evaluation of the morality of such data strategies in the public sector is one that defines what is morally right as when both 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 available to mitigate or stop harmful actions when they are under way.

A point in case that highlights the need for a systems perspective on intended and unintended consequences of using data for public sector innovation is that of the UK's National Health Service (NHS). The NHS decided to sell on individual and linked health data to third party companies to use analytical skills outside government to help with planning, forecasting and reforming 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 misuse of such data, for instance, for marketing purposes (Rector, 2021; Full Fact, 2021; Rapp and Newman, 2021). It is also questionable whether despite anonymising details of the data such as names and addresses, individuals and groups are protected from re-identification via triangulation with other data sources. Another example is the case of the Department for Motor Vehicles (DMV) in the U.S. states of Texas and Colorado selling off service user data to commercial companies (Whalen, 2019; New, 2020). 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 innovative use of public sector data will involve working with third sector parties, mission drift as much as intentional misuse of data need to be considered when designing data protocols. The examples also illustrate that the existence of rules and - in the case of the EU's GDPR which still was 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 for democratic contexts for this problem 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 forms of 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 are set aside to make the process explicable to those affected by them. This is no simple task as governments still face skill gaps in cutting

edge areas of information technology. In many instances, government will need to rely on external expertise to develop and maintain skills of their staff to implement data solutions that are ethically sound and secure.¹⁰

Innovation and core mandates of the public sector

There is a danger that a greater push for data availability for innovation's sake is at 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 defence, energy and telecommunication 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 organisation. Cost-benefit arguments that down-weight 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 interplays 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 bureaucrats to act within their assigned responsibilities is greater than that for innovation, so that even when they willingly block innovation but stay within their assigned mandate, their guilt would be limited. Such a claim becomes highly problematic as soon as they are moved outside a context where every group in society has equal access to enforcing accountability. Even for countries where electoral democracy flourishes, state institutions can be systematically biased against certain groups. A mere rule-following can then create significant welfare costs.

Over the last decade, the use of data-driven policing has provided many examples where a genuine conviction to render public services more efficient and automatised can negatively affect swathes of society. Profiling algorithms have been shown in some cases to hide systematic discrimination deep inside their processing structures. In such a situation it is arguably more ethically acceptable for a bureaucrat to go out of their way to improve algorithms and

¹⁰Some governments have already developed schemes to encourage skill transfer from outside into government for innovative practices. For example, Latvia runs a "shadow and entrepreneur" programme as part of which civil servants learn from private and third sector entrepreneurs about new developments in tech (OECD, 2020).

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

It has to be noted that what is considered a transgression and what part of a bureaucrat's discretion is subject to debate - a debate that can be highly politicised. It would hence be most appropriate to revise Jordan (2014)'s 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 that this creates is that in the absence of rules and moral absolutes the state apparatus needs to rely on the moral compass of individuals and norms reinforced by organisational culture to navigate towards an ethical delivery of public service. The second part of this chapter, following on from this section, therefore tries to provide a framework for public servants evaluating new data approaches.

5 Conclusions

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 attempted to do so by providing a heuristic that see ethical challenges to fall broadly on three dimensions: (i) an individual dimension which comprises demands for dignity and privacy, (ii) a group dimension which relates to allowing for voice and dissent, and (iii) 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 preliminarily calls for dignity and personal privacy, the group dimension relates to how data creates and diminishes voice, the public facing one how it relates to public sector values.

There is wide range of values and considerations that can be framed as “public value”. This chapter chose to focus on tree that are central to many discussions of public administration effectiveness, efficiency and measurement: productivity, accountability and innovation. The section on productivity highlighted how important it is to chose metrics well and understand their strengths and biases (see more on this in Sections 2 and 3 of this book). Discussions of accountability here presented tensions between using data to increase the accountability of the public service by emphasising explicability over mere transparency. Tensions inherent to using data to create innovation, measure innovation and the delicate balance between accountability and innovation showed that dialogue and regular reviews of what 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 over the other.

To make things more practical and support the reflective approach to measuring public sector work and employee’s effort advocated in this chapter, it concludes with a framework that practitioners can use to build and review measurement strategies.

6 A framework for evaluating the ethics of measuring and tracking public sector workers

What is considered as ethical and morally right can be very context-dependent. There are however questions that provide general guidance on how measurement can be conducted in an ethically sound manner if asked regularly at key junctures of data collection, analysis and reporting. The following ten questions invite to probe key aspects of epistemological (*what can and what do we want to know?*) and moral (*what moral considerations apply?*) concerns surrounding data collection in the public sector.

1. What do we want to know?
2. Why do we want to know this?
3. How granular does a measure need to be, in order to be useful?
4. What time horizons for data collection are functionally adequate and ethically defensible?

5. To what extent does data need to be linked, in order to yield useful insights?
6. Do the gains in knowledge merit data collection?
7. What safeguards exist to prevent harming public sector values, individual freedoms and dignity?
8. Is the approach to data collection transparent and explicable?
9. Who has a say in what gets measured?
10. Are there times and opportunities built in for review?

The process of answering these questions and ensuring that the answers they throw up have an impact can help to create reflective and respectful practices of measurement.

6.1 What do we want to know?

Clarifying the goal of data collection helps to narrow the amount and types of data that are collected. In many instances questions can be answered with less data than what is feasible to be collected. For example, while it is possible to collect data on all user activity on work computers of all employees, it is questionable whether this helps to answer whether they use the technological tools made available to them productively. As another case in point, it would be possible to ask civil servants in surveys as how corrupt they rate their colleagues, but it is questionable whether this would yield data that helps to stem corruption. Knowing what the goal of measurement is needs to form the start of an organisation- or public-administration-wide data strategy. Where data is already being collected, answering the *what do we want to know* question can help to prune data collection efforts, which can reduce risks associated with data leakage, re-identification and invasions of privacy.

6.2 Why do we want to know this?

It is tempting to collect data simply because it can be collected and leave the task of figuring out what to do with it for later. Undeniably, collecting data indiscriminately holds the potential for innovation because use cases might only become apparent at a later stage. However, the usability of data is closely tied

to how it was collected. Vidgen et al. (2020) propose a framework that can help public service providers map data collection efforts to values. Aside from considerations typically covered by ethics guidelines (e.g. fairness and equity), the authors encourage decision-makers to ask themselves how the solution they seek defines them as an organisation and how that maps on what the organisation aspires to be and become. This logic can be extended to data collection. How an organisation handles data should align with aspirations of virtue. Data should be representative of the population of interest and informative to stakeholders.

6.3 How granular does a measure need to be, in order to be useful?

In this volume, we argue for the importance of micro data. While it is a truism that more detailed data provides more information, individual case data also comes with more individual-level noise and an increased risk of (re-)identification. Practitioners should ask themselves whether they require, for instance, data on every individual in a team, their exact age, location and years of employment. In many cases, broader bands such as age ranges or team-level information (coarsening) might provide enough or even better insights as individual noise is averaged out.

Where individual-level data is necessary and sensitive details must be included to provide value, statistical techniques can be used to prevent re-identification. Apart from coarsening, data can be suppressed (e.g. only display cell values over a certain count), swapped, infused with noise or synthetic data created that are used instead of the original data (for an instructive overview, see: Schmutte and Vilhuber, 2020). All techniques involve trade-offs with regards to protecting privacy and affording reproducibility. The refrain from earlier sections thus continues: technological solutions alone will not suffice; ethical data strategies will require balancing trade-offs, which should take place in a consultative and transparent manner.

6.4 What time horizons for data collection are functionally adequate and ethically defensible?

In popular discourse, the “right to be forgotten” has been at the centre of debate on the temporal dimension of data. The “right to be forgotten” is the concept

that an individual has the right for personal data held on them to be deleted. It is enshrined in the European Union’s General Data Protection Regulation (GDPR, chapter 17) and several jurisdictions have adopted similar laws (Cofone, 2020). News items on the topic often dwell on debates of people having done embarrassing things online or were featured by name in local news stories. They want their data to be removed to avoid jeopardising future career opportunities (Selin Davis, 2021) that could be endangered by public knowledge of their online pasts. While these examples might be amusing, the time dimension of data poses serious challenges for public administrations.

Storing data for longer than its immediate use mechanically increases the risk of data leakage and breaches. Given that political control over the civil service changes periodically, it is also ethically questionable whether current political principals should have access to data on non-current public sector employees. To provide protection for public sector employees and instill trust about data usage, time horizons for data storage and types of uses should thus be enshrined in measurement protocols.

However, applying one-size-fits-all data storage rules (e.g. many organisations categorically only store data for up to three or five years) to data handling implies missing out on many of the innovation- and productivity-boosting characteristics of data. For example, the Australian civil service has data on file about civil service employees going back to the 1970s. This enables them to understand how changes in structure and policy correlate with changes in workforce composition. Many governments now also use machine learning which relies on historical data. Chatbots, for instance, continuously improve their function based on data saved from previous interactions. If an employee however requests for their data to be deleted or if the organisation has a policy that data on employees should be deleted once they leave the organisation, the model on which the chatbot operates needs to be retrained. This is costly in terms of manpower, time and disruptions caused to service (e.g. see for a more technical discussion Izzo et al., 2021). For accountability, public administrations also need to plan for how it can be verified that data is deleted thoroughly and securely (Sommer et al., 2020).

Not only “what”, “why” and “how” questions but also those concerning “for how long” must form the core of a framework for data collection in public administrations.

6.5 To what extent does data need to be linked, in order to yield useful insights?

The question to what extent data needs to be linked follows a similar logic as questions about the granularity of data. For instance, having a centralised HR database for all government staff that links recruitment, performance and development data could unlock valuable insights for staffing forecasts and the reform of recruitment and training practices. There is however a strong argument for keeping separate addresses or health records associated with individual staff as the linking of such data increases the risks associated with data breaches or misuse of data.

Employment data can include names, addresses - both digital and physical -, dates of birth, social security numbers or other sensitive IDs. While it might seem innocuous to use such data for marketing purposes, the linking of names, addresses and birth dates lends itself to identity fraud. Making such data public can also put staff in physical danger. Persons who protect their addresses because of previous experiences with stalking, domestic violence or other infringements of physical safety might find that offenders can now easily find them.

Data request protocols could help to prompt administrators who want to collect or analyse data to weigh up such risks against the public value that they deliver.

6.6 Do the gains in knowledge merit data collection?

Research ethics commonly decide whether the dangers posed by data collection are merited by weighing up the potential harms and benefits. In the case of public sector employees, there are five types of gains that can coincide or be mutually exclusive: benefits can accrue to (i) the individual on whom the data is collected; (ii) the organisation to which the individual belongs; (iii) the acting government; (iv) the narrowly defined stakeholder group of the organisation including user groups and politicians in charge of the relevant policy portfolio and (v) society at large. In an ideal scenario, all five benefits are present. Often however trade-offs will be necessary.

Research ethics typically highlight that harm to individual participants of the research must be avoided. The only exception is where societal benefits might outweigh considerations of harm. For example, if data is not used to

benefit society at large, the small infringements on employees' time, privacy and dignity might not be justified (Resnik, 2020).

Frontiers of data collection throw up new but related conundrums. In some cases, there is a strong case for linking data (see earlier section). That is, for example, the case for being able to link attitudinal data collected via surveys with behavioural data. Behavioural data - such as whether and when staff leaves an organisation, gets promoted, moves teams, which cases they handled and how well they fared - when linked with survey data can help to validate measures. It can help to understand whether patterns in sentiment observed in surveys relate to changes in employment and performance.

Importantly, how such data is collected and how it is used must figure into cost and benefit calculations. Using data on performance can be used in a manner that increases control without passing on benefits to employees. For example, finding ways of motivating employees without increases in pay should not lead to forcing them into economic insecurity. In other words, cost-benefit-calculations are inherently value-based. An organisation can use insights to pressure employees to become ever more efficient without regard for their physical and mental well-being and economic security. Or, it can pass gains in efficiency on to workers; for instance by having shorter working days or awarding extra days of leave to volunteer or to work on their pet projects.

As the next questions probe, whether adequate safeguards are in place and whether decisions can be made collectively can help to provide for more equitable and consensus-based decisions on what counts as a cost and what as a benefit.

6.7 What safeguards exist to prevent harming public sector values, individual freedom and dignity?

Safeguards such as anonymising data, blurring pictures, using encryption, saving parts of a data set in different data bases and keeping access to data on-site and many more mechanisms can be used to make it less likely that data is accessed by those who should not access it or that details are disclosed that should not be disclosed. None of these strategies will be fruitful however if the values that they aim to safeguard are not cherished by stakeholders of the data process.

Data collection should not be regarded as a burden or breach of individual dignity and rights to privacy. Engaging with the communities on whom data is collected before this happens is thus crucial. For example, many employees might be willing to provide data on their health if they trust that this will be used

to offer them better healthcare coverage and the creation of healthier working environments. The opposite might be the case if they fear that organisations will use this data to minimise costs associated with unhealthy staff, making it less likely that such staff gets hired, promoted or retained.

Organisations can build internal ethics review boards with rotating membership or collaborate with academics or professionals who have access to external ethical review boards. Most importantly however checks for safeguards should be part of every step of the ethics process. This will involve ensuring that those who collect, handle, store, analyse and report the data have internalised ethical research approaches. As tasks are shared out, this is might not be a straightforward matter. Fostering a climate of reflective and open exchange will be necessary to avoid turning ethical review processes into red tape. In the private sector, the benefit of fostering an ethical work culture is often justified in terms of gains in productivity or innovation - a link which is often tenuous (Riivari and Lämsä, 2014). The link for public sector organisations is much clearer - fostering a culture of ethical research and data handling goes hand in hand with fostering concern for creating a positive impact on society.

6.8 Is the approach to data collection accountable and explicable?

Accountability in public service should not only extend to citizens and political principals but also to the very people who run public administrations. Providing for accountability in data collection is instrumental to building trust. What data, why and how it is collected, analysed and used should be communicated to staff in a clear and understandable manner. As Morley et al. (2020a,b) stress, explicability - being able to explain motives and what is done - is more important than complete transparency in cases where staff might not have the necessary technical knowledge to decipher sampling approaches, algorithms, database systems or similar.

6.9 Who has a say in what gets measured?

Ethical challenges facing public administration are particularly protracted as they involve balancing concerns of a large and diverse group of stakeholders. If administrations yield too much to one group, they can find themselves politicised or captured by interest groups. If they adapt too little, they risk becoming tech-

nocracies. Mapping who are the communities affected by data collection efforts ought to be integral to the planning process. Stakeholder consultations have become standard practice for policy-making in many countries (Gramberger, 2001). However, consulting stakeholders does not equate to providing voice to them. This becomes especially evident if there are imbalances in power. For instance, senior staff working in central ministries might dominate decisions on what gets measured about casual workers employed in rural parts of the administration. This is problematic in terms of equity as much as data quality. If those working on the ground and most knowledgeable about what is to be measured are not adequately consulted, measures might miss factors that are predictive of targets such as improved performance, well-being and staff retention.

As an extension of this question, one should also consider: who collects the data and for whom? In many cases data collectors are also public sector employees. This means that even when formal controls for privacy and confidentiality are in place, having a team in government that knows more about other staff can skew power balances. As Resnik (2020) points out, they could by accident reveal sensitive information about teams and people on whom they collect data. They might also be pressured by managers or political principals to disclose information informally.

In some cases, government data might be collected on behalf of or by an external party such as a donor. Data collection efforts conducted by the OECD, United Nations, World Bank, other development banks, big bilateral donors or academic institutions might introduce different types of power imbalances. Threats can manifest in terms of potential reputational damage, financial losses or declines in credibility.

Increasing the diversity in who has a say in data collection and ensuring that the results in the end benefit society at large needs to be at the core of evaluating whether the identity of the data collector poses an ethical dilemma.

6.10 Are there times and opportunities built in for review?

Decision-making power should be distributed and accountable, yet not at the expense of innovation and responsiveness to changing demands and needs of stakeholders.

Setting up data collection efforts following a time and labour intensive ethics review process might deter recurring review and innovation. Organisations

might stick to reusing measures because they had been approved and gaining renewed consensus is seen as too burdensome and politically risky. This can lock in power imbalances and leave organisations with aging instruments, unfit to measure new developments. Instead, organisations should create data collection frameworks that allow for quick and frequent review. For instance, several public universities have developed ethics boards with rotating members, to share out the burden, and frequent but short meeting times. Applications are pre-filtered by the expected gravity of ethical concerns, so those that likely need less in-depth discussion can be reviewed more quickly.

7 Conclusion

The data revolution in public administration is gaining momentum. We can expect governments around the globe over the next two decades to adopt data analytics not only for delivery of services but also to reform and improve the mechanisms behind service delivery. As it is clear from this and the remaining chapters of this volume, the authors are cheerleaders of an increased use of data. Such enthusiasm however does not preclude an acute awareness that an expansion in data collection, processing and usage requires constant engagement with ethical questions that research on public sector employees and public service delivery raise.

In many instances, the expansion of evidence-based public administration can help to address existing ethical conundrums such as trade-offs between productivity and accountability. In other instances, it creates new moral puzzles such as those surrounding how data on employee groups is created and used.

In all cases, a systematic engagement with these problems can help to create reflective, responsive and fair analytics infrastructures for the public sector. The framework of nine questions presented here might not be comprehensive but its question-based form lends itself to easy adaptation, so that it is fit for local contexts.

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