CHAPTER 4

Wider Audiences for New Measures of Progress

Abstract This chapter explores the relationship between the production and the use of statistics to yield beneficial social change. It seems that, although strides are being made, there is insufficient engagement with users and potential users, as well as with the multiple intermediaries between producers and users, to discover exactly what they need. This hinders attempts to determine the public value of official statistics. In addition, there is often a lack of awareness of what statistics are available, and of how to access them, as well as of the efforts made to ensure the trustworthiness and quality of official statistics. This can result in misunderstanding the basic aspects of society. We suggest four broad ways that statistics can be used to yield beneficial change: improving national and local debates, helping to build a national debate, exploring what it means if something is not included in a nation’s set of official statistics, helping to drive behaviour change in enacted policies.

Keywords Users of statistics · Public value · Trustworthiness

4.1 Introduction

Understanding of the state of homeless people in the UK is only gradually being acquired. At 9.30am on 1st October 2019, the UK Office for National Statistics (ONS) released updated statistics of the number
of deaths of homeless people in England and Wales (ONS 2019a). These were experimental statistics, derived using statistical modelling to estimate the number of deaths of homeless people, whether or not it was stated that they were homeless on their death registration. One previous set of such statistics had been published, a year previously, when the ONS reported on deaths in 2013–2017. The updated statistics showed an estimated 726 deaths of homeless people in England and Wales registered in 2018, an annual increase of 22% and the highest year-to-year increase in the figures over the six-year period. This was widely and prominently reported in the media and circulated on social media.

The newspapers for the following day carried reports based on the figures, along with opinion columns calling for changes in legislation, for care services to be improved and new, preventative approaches to be adopted. It was also reported that “Two dozen homeless protestors have stormed a council-owned building in Chester, north-west England, and barricaded themselves inside … The protest began as official figures revealed that a record number of homeless people died last year” (Wolfe-Robinson 2019). Even if this was just a reported coincidence, and whatever the rights and wrongs of such direct action, it does prompt us to wonder if statistics really do lead people to take action to change their situation themselves. We have frequently made the point that developing measures is not enough, but those measures have to be used: an example of what Marx argued in 1845, that “Philosophers have hitherto only interpreted the world in various ways; the point is to change it” (Thesis 11 in Smith and Cuckson 2002).

It is our thesis in this book that statisticians as well as philosophers are needed to help us all interpret and change the world. It is not just down to policy-makers to use statistics (the subject of the previous chapter). In President Sarkozy’s comment welcoming the Stiglitz report that we quoted in Chapter 2, we (the authors) take it that he was being expansive in his remarks, not just directing his remarks to other politicians. This is not the only example by far of the use of such inclusive language. Germaine Greer noted that a film celebrity commented on the Australian bush fires thus: “The tragedy unfolding in Australia is climate change-based. We need to act based on science, move our global workforce to renewable energy and respect our planet for the unique and amazing place it is”. This prompted Greer to ask “Who, one wonders, is the ‘we’ he admonishes? What global director has the power to move the world’s workforce?” (Greer 2020, p. 21).
In this chapter we explore how official statistics can be used throughout processes of social change, looking to the use of official statistics by civil society, businesses, and others. We anchor our exploration to the UN’s fundamental principles of official statistics introduced in Chapter 1, particularly that official statistics should be useful to the Government, the economy, and the public, and that they should earn their place as an indispensable element in the information system of a democratic society.

### 4.2 The Public Value of Official Statistics

A concise way of summarising the role of official statistics as set out in the UN’s fundamental principles is simply to say that official statistics should serve the public good. That is how the UK’s Office for Statistics Regulation (OSR 2019) describes its vision for official statistics, explaining “It means far more than the traditional notion that statistics provide the evidence base for policy decisions by Ministers and Parliaments, important though this is. Statistics should meet the needs of a much wider range of users and this is the essence of how they serve the public good” (OSR 2019, p. 2).

Listing the breadth of the potential user base beyond policy is one way of illustrating the public good of official statistics: the OSR mentions organisations beyond governments and parliaments “including charities, researchers, trade unions, businesses and community groups” as well as citizens (OSR 2019, p. 2). The kinds of uses identified by OSR are listed in Table 4.1 and to which we have added some other uses that we are aware of. Education is included because schools were a major user of a previous version of a set of sustainable development indicators, for example. The OSR is formally part of the UK Statistics Authority, under which the ONS also sits, so we can take this typology as broadly representing how UK official statisticians understand their outputs to be used.

A similar view of the role of official statistics has been captured for the European statistical system, through which Eurostat, the statistical office of the European Union, collects and collates statistics from member states for the EU as a whole. Vichi et al. (2015) constructed a classification of users that we summarise in Table 4.2 and a taxonomy that allocates users “according to their frequency of statistical usage and proficiency”, which we show in Table 4.3.
Table 4.1  Kinds of uses of official statistics (OSR 2019, pp. 2–3, with additions from authors shown in italics)

| How used                                                                 | Comments                                                                 |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Provide the evidence base for policy decisions by Ministers and Parliament | Also used by devolved governments and administrations, local government   |
| Help inform decisions by organisations in civil society                  | Including charities, researchers, trade unions, businesses, and community groups |
| Help civil society organisations hold government to account              |                                                                 |
| Influence choices made by citizens                                       | Including how they vote, where they live and a wide range of other decisions |
| Inform many public and political debates, raise awareness, advocate positions, and proposals | For example, about health, education, the economy, crime, the environment, and many other topics |
| Help construct a sense of place, society and democracy                   | Through the pervasive uses above and in education. Also, the process of developing new statistics could offer ways for citizens to be fully engaged and to be co-creators of social advance |

In education and training

Including statistical literacy and data handling skills, as well as supporting the curriculum

Table 4.2  Users of European official statistics (Vichi et al. 2015, p. 3 and Appendix 1)

| Institutional users | 10 named institutions, headed by the European Parliament and the European Council |
|---------------------|----------------------------------------------------------------------------------|
| Non-institutional users | 1. *Users with a general interest* (e.g., economic growth):                         |
|                      | • Journalists and media                                                             |
|                      | • Citizens                                                                         |
|                      | • Students (by level of education, or age) and Teachers (by level of teaching education) |
|                      | 2. *Users with a specific subject/domain interest* (e.g., health):                  |
|                      | • Other decision-makers                                                             |
|                      | • Policy analysts                                                                  |
|                      | • Marketing analysts                                                               |
|                      | • Experts in a specific field                                                      |
|                      | 3. *Users with a research interest* (e.g., innovation in enterprises)              |
|                      | • Scientific community—academics and researchers at universities and research institutions |
|                      | • Consultants and researchers in Governmental Agencies and private sector          |
Table 4.3  A taxonomy of individual users according to their frequency of statistical usage and proficiency (Vichi et al. 2015, p. 4)

| Classification                  | Description                                                                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Heavy users                     | Researcher, specialist, politically or civically engaged citizen, and others that use statistics on a daily basis. Typically, this is the person who knows where to find data and how to interpret it |
| —of which, very heavy users     | Researchers who would be routinely engaged in using disaggregated and micro data in their research and who could contribute to the improvement of data quality by engaging with data producers |
| Light (occasional) users        | User who from time to time checks some figures. He/she would know the National Official Statistics and Eurostat websites but would find some difficulty in getting the data he/she needs and would not be looking for metadata |
| Non-users who might be Potential users | All people who do not go looking for data believing it is something hard to understand and not being aware of data’s relevance and richness |

Classifications and typologies like these are generally, and by definition, reductive. They are helpful in putting some structure into a plethora of individual users (and non-users) and can reinforce the point that “the needs of both political authorities and the common public are equalised” (Sæbø and Holmberg 2019, p. 173). However, we should be aware of the dangers of relying over-heavily on typologies of users. The categories may well reflect the experience and background of their compilers, as well as the existing suite of official statistics and dissemination channels. These may all be valuable but incomplete. For example, a list of user segments published by the UNECE (2018, p. 8) looks very similar to the segments in Table 4.2, with the addition of “Users with a reuse and reproduction interest”. That includes other producers of official statistics, and private or government organizations providing information services and products, including App builders. It conveys a fuller picture of official statistics in the contemporary information market, but we must still ask if it is complete.
Classifications such as these tell us nothing about the relative size of the user base in each row of the table, or about the overall value of official statistics to each type of user category. Drawing up tables like these is therefore the starting point for a fuller understanding of the public value of official statistics; these tables should not be read as an assessment of public value.

Work on the wider interpretation by official statisticians is under way, following a recent publication by the UN Economic Commission for Europe (UNECE 2018) that “showcases the value of official statistics and provides recommendations for statistical offices on ways to promote, measure and communicate this value”. There were few such valuations ahead of the recommendations and we are writing too soon after the publication of the recommendations for new figures to appear. Early examples tend to be for specific sets of statistics, rather than for official statistics as a whole. For example, Bakker (2014, p. 6) valued the New Zealand census of population, presenting a range of estimates of its net present value with a central conclusion of “close to $1 billion for the benefits to New Zealand gained through the use of census and population statistics information over the next 25 years. In other words, every dollar invested in the census generates a net benefit of five dollars in the economy. This value estimate though is not at the level of rigour applicable to assets recorded on an organisation’s balance sheet. It does not include many of the uses discussed but not quantified”.

It is quite likely that big numbers will emerge from exercises like this, even if they are billed as lower bounds of the public value of official statistics. These numbers may well get even larger with greater use of the underlying data, anonymised for research, in fields such as commercial pharmaceutical research. Helm (2019) has reported that several US companies “have paid the Department of Health and Social Care, which holds data derived from GPs’ surgeries, for licences costing up to £330,000 each in return for anonymised data to be used for research” and that Britain’s 55 million health records are “estimated to have a total value of £10bn a year”. Official statistics based on data derived from general practitioners’ (GPs) surgeries include, for example, local area migration statistics, for which registrations with GPs are one of a number of sources.

The ONS announced in September 2019 that it was beginning work to lead a UN project “to measure the true value of the world’s official statistics” because “until now, little work has been done to assess the monetary value” of these important datasets, which include measures of GDP,
migration, and international trade (ONS 2019b). As this perhaps hints, research users are increasingly looking to access anonymised datasets within secure environments, as well as the statistics compiled from the data. This adds to the difficulty of measuring the value of statistics and in communicating this value to the public, who are ultimately the source of much of the data used for official statistics.

Nevertheless, there is a logic to knowing the monetary value of official statistics. The ONS news release quotes Fiona Willis-Núñez at the UNECE: “We official statisticians like to repeat the adage that only when something is measured does it become truly visible and understandable. We know our products are important, but being able to prove this to decision makers relies on having quantifiable evidence of our efficiency and value for money” (ONS 2019b). The greater benefit of the exercise, though, would surely be the increased detailed knowledge that should result, about who uses official statistics, how they are used, and why they are not used. The UNECE recommendations acknowledge that “Statistics need to be developed with users in mind. User needs differ depending on circumstances … It may be useful to identify user segments so that it becomes possible to develop products and services that meet specific user needs better” (UNECE 2018, p. 8).

Frankly, coming up with the total value of official statistics is likely to be a distraction. The real goal is to increase the use and usefulness of official statistics, which would of course be achieved if each statistical output became more widely used. We mentioned an example of the potential for this at the end of Chapter 3, to do with pedestrian deaths in the US. It was reported that the “small community of specialists who pay attention to US road safety statistics” saw in 2010 an upturn in the number of pedestrians killed on American roads, which was the first of a series of increases that has continued almost every year since (Baker 2019). This led to some debate about the design of streets as well as the more technological advances in car design. But, we suggest, would it not have been better if the small community of users of these statistics had been larger from the outset and included all sorts of interest groups, including in urban planning, vehicle design, and road safety?

Very little seems to have been studied and published about how official statistics are used, or why they are not used. Bartlett and Tkacz (2017, p. 22) recognise “a well-established field of inquiry which has studied the role of numbers, facts and data in organisational life”, including for example finding that while numbers “can appear clear, objective and
‘transparent’, this appearance can be misleading”. The literature tends to treat numbers and data in a generalised way, rather than focusing in on the different sources of numbers and data, especially official statistics. There are of course many papers and articles reporting on analyses of particular official statistics or data, invariably with some mention of potential policy applications, but these shed little light on how statistics are used within specific policy or other decision-making. There are also papers looking at how national and regional statistical systems operate in practice. For example, writing from Statistics Norway, Sæbø and Holmberg (2019, p. 173) discuss challenges in meeting the differing needs of a variety of users and note that the European code of practice requires that “procedures to consult users must be in place and that relevance and user satisfaction is monitored. Statistics must change according to user needs, at the same time as comparability over time must be considered”. However, while relevance of the statistics (i.e. meeting user needs) might be the most important attribute of statistics produced by a national statistical office, it must be supported by other requirements such as quality, cooperation, resources, and cost effectiveness on one side of a set of scales, and, on the other side, data confidentiality, professional independence, and impartiality (p. 172).

Bache (2019) has studied “the role of evidence in shaping the prospects for wellbeing in UK public policy” (p. 1) but places official statistics explicitly (as “Government surveys [e.g. ONS]”) as just one entry in his list of 24 evidence sources reported by his interviewees (Table 4.1, p. 57). The list suggests to us that official statistics are not a primary source, but may well be included in other types of sources, such as academic papers, government reports, seminars, and the internet (but of course we do not know this for certain). This supposition is supported by a quote reported by Bache: “obviously statistics hold quite a large sway … but they need the stories behind it, so they need the qualitative work either to help them understand what the statistic is saying or for them to be able to translate that into a real-world environment for their decision-makers” (p. 108). These findings fit with our understanding of how statistics are generally used.

Similarly, Bache and Reardon (2016, p. 132) make the point that “data should be used that is ‘good enough’ for the purposes at hand” and that there is “an emerging consensus on a mix of subjective and objective indicators”, as delivered by the ONS’s measuring national wellbeing programme. However, that only takes us to the supply of relevant data on
wellbeing, not to its use, or even to wide enough awareness of its existence and how to access it. Hornik and Cherian (1993, p. 229) have argued that, “Literature about data-use has tended to overstate the importance of data-providers … and to understate the importance of data-users”. They were addressing their observations particularly to the field of marketing, where data is provided by market researchers and used by product and brand managers, but again the point probably holds generally.

Models for data use, which appear applicable to official statistics, have long existed. Miller and Mork (2013, p. 57) take the well-established concept of a value-added chain and propose a data value chain as a framework to manage big data “holistically from capture to decision making and to support a variety of stakeholders and their technologies”. Value chains such as this are often presented as a linear pathway, from collecting data to decision-making. Miller and Mork’s first link in the chain involves “creating an inventory of available data sources and the metadata that describes the quality of those sources in terms of completeness, validity, consistency, timeliness, and accuracy” (2013, p. 57). This is a familiar starting point in official statistics, often taken with the aim of meeting a range of user requirements that are specified only in general terms. However, the value accumulated through a chain of activities should be enhanced if there is explicit feedback of user requirements from the start. Part of the final, decision-making stage should ideally be to join the ends of the chain together, with recommendations for changes or additions to future data collection.

Kandogan et al. (2013) also see the potential of big data to answer open-ended questions. Their interest is particularly in business users of data but their approach is applicable to all users. They reported that “the tools of data science are still oriented toward the skills of a technical staff person rather than a business user. The new challenge is to enable business users with the powers of data science”. These authors, from IBM Research, propose “rapid-fire conversations in which data is automatically found, cleaned, transformed, and visualized so users can go through a number of questions very quickly in an iterative manner. Central to our system is social and intelligent conversations with data, where analytic work is placed in a social context with a user experience that matches most social networking applications, and in which our system participates in the conversation like an intelligent partner, recommending datasets, visualizations, and people with whom to collaborate” (2013, p. 427). Central to this approach is the theme we noted earlier, of drawing on
multiple sources, here recognising that some datasets might be recommended over others. We will discuss data science and official statistics in more depth in the next chapter. We also urge readers to accept that big data is not immune from mistaken analyses and conclusions.

Anything that seeks to increase the use and usefulness of official statistics will invariably have challenges to meet and barriers to overcome. Using any form of evidence may not be easy and may require skills, expertise, and experience to use it effectively. These skills also need to be mirrored by producers, to anticipate how their data and statistics can be applied. There are things that the producers of evidence can do to make their products more useful and more widely available. Support comes from initiatives and networks like the Alliance for Useful Evidence (https://www.alliance4usefulevidence.org/), which offer practical advice and act as evangelists for evidence, especially for useful evidence. This chimes well with the key characteristic of official statistics, to have utility.

There is an important role to be played by intermediaries who add value to statistics and data beyond producer organisations. This is no better exemplified than by the late Hans Rosling, whose innovative presentations based on official data are available, along with new material, at the Gapminder foundation (https://www.gapminder.org/). The foundation “fights devastating misconceptions about global development … produces free teaching resources making the world understandable based on reliable statistics … promotes a fact-based worldview everyone can understand”. We will return later in this chapter to the role of influencers and intermediaries in the context of measures of wellbeing and progress.

To conclude this section on the public value of official statistics, we again make the point that official statistics exist as part of a complex ecosystem made up of multiple sources of information and multiple transmission routes. It seems to us that the journey of any official statistic from its publication to any one of its uses might be considered against the steps shown in Table 4.4. This simplistic representation still suggests that there might be eight ways in which the statistic is used, only one of which is where it is the right statistic for the intended use, is quoted correctly, and was accessed directly from the national statistics office or other official source website or publication. Table 4.4 should be read only from left to right. Starting on the right-hand side with a question about statistics (e.g., what is the current level of net migration in the UK?) will involve the stages in Table 4.4 but also other choices, including the medium used to post the question. Using an Internet search engine, for example, can
Table 4.4  The journeys that an official statistic can take

| Statistic in official source | User accesses official source OR | Statistic is appropriate to intended use OR | User accesses another source that quotes this statistic | Statistic is quoted correctly OR | Statistic is not appropriate | Statistic is mis-quoted |
|-----------------------------|---------------------------------|------------------------------------------|---------------------------------------------------|---------------------------------|-----------------------------|------------------------|

lead directly to official sources, but also to international collections of data, research agencies, think tanks, and media reports of the published data. Using social media opens up even more diverse sources.

4.3 **Can Official Statistics Change Anything?**

One reading of the *Fundamental Principles of Official Statistics* might be to conclude that it is sufficient that official statistics are used to reflect the social, economic, and environmental situation, acting as mirror held up to society. This is a passive role, albeit a form of infrastructure essential to a democratic society and available for all to use. It might just move political discourse onto a firmer footing, for example, but only if politicians used it. Interviewed in 2012, cultural theorist Stuart Hall observed that “Politicians always think they know what people feel. It’s a fallacy, because there is no such thing as ‘the people’. It is a discursive device for summoning the people that you want. You’re constructing the people, you’re not reflecting the people” (Williams 2012, para 14). We now have in the UK, and in other countries, official measures based on how individuals feel, in terms of their personal wellbeing, as well as measures of health, welfare, and social and economic position.

However, having these measures available does not mean that everyone is aware of them or can quote them. Ipsos has been running studies on public awareness of what the statistics say for key social realities in their country (https://perils.ipsos.com/). Participants in these studies are asked to say what they think is the average happiness score, along with other statistics such as the level of immigration, rates of crime, teenage pregnancy, and obesity. In an overall assessment of the extent of misperceptions in 13 countries studied since 2014, Italy scored the worst.
Sweden showed the least extent of misperception, around half of that for Italy, with Britain having a score around the middle of the range (Duffy 2018, p. 218). In short, “many of us get a lot of basic social and political facts very wrong” (p. 18). Of course, this might not be too severe a criticism, since it might be better to appreciate that facts are widely available and know where to look things up, rather than hold more than a handful of memorable statistics in one’s head, especially since the facts change over time.

There are no shortages of examples where referring to official statistics could help understanding of what is going on, and even demonstrate that we are living in, or on the brink of, a golden age for statistics. But this does not always happen. One example is that official statistics were tracking, at least in some countries, increasing inequality “even though GDP per capita was going up” (instanced by the US, where “most individuals saw a decline in income, adjusted for inflation” over the same period: Stiglitz et al. 2010, p. xix). The prevailing political narrative was around increasing prosperity for the nation as a whole, apparently oblivious to the personal experiences of the majority of the population.

There are major issues around how information is used and abused. Misperceptions and missed opportunities arise for all sorts of reasons, not least because people are not aware of where to find the official statistics or the analyses in which they are used. In terms of more manageable aspects to this, we might speculate that one, perhaps minor, contributory factor might be the extent to which particular official statistics enter the public domain. A number of official statistics might be judged to have gained the attention of the media at least. For example, GDP, unemployment, and inflation statistics are high-profile and have regular and frequent publication to pre-announced release dates, so they can be factored into news planning. Other official statistics occasionally gain wide attention, especially if they are novel, as was the case with the statistics on the deaths of homeless people quoted at the beginning of this chapter. We recall the launch of the ONS’s national wellbeing measures in 2010 by the then Prime Minister. These gained brief media attention as Mr. Cameron’s Happiness Index before fading from the headlines and feature pages.

Away from the headlines, many specific sets of statistics are known to, and anticipated by, relatively small groups of engaged users (for example, maternity statistics). That leaves a very large number of official statistical releases for which, at best, their use and user base is unknown. This was noted by the UK Parliamentary committee looking into the
governance of official statistics mentioned in Chapters 2 and 3. The committee began its conclusions thus: “We agree with the evidence we received that those producing official statistics do not understand all of today’s users and potential users of statistics and how statistics are used. It is surprising that [UK official statisticians] seem not to have carried out research into users … not delivering public good as required under the legislation” (PACAC 2019, p. 54). The committee recommends that cross-government research should take place, “to build an evidence base of how statistics are used in practice, taking into account the full breadth of stakeholders (not just users) and to establish where data gaps persist”. The committee recommended a structured approach, with “sector by sector reviews, to understand what stakeholders need or want, and to make statistics more relevant”. The UK National Statistician accepted these recommendations and this market research is now (i.e. May 2020) getting under way. When the results will appear is unclear, especially now that the coronavirus pandemic has curtailed activities.

So, can official statistics change anything? Our experience of UK and European official statistics does leave us optimistic that official statistics are being used, and can be used even more. In part this rests on the concept of having a set of official statistics available for a country, along with processes for the system to evolve. We suggest four broad ways that statistics can help change things, as follows.

First, to improve the quality and effectiveness of national or local debates and conversations about the country we live in. One uncontested sign of a modern democracy might be that it encourages a variety of opinions to be heard within society and within public, civil and businesses organisations and institutions. Statistics can help structure the discourse by providing a common set of facts, by keeping people informed and, indeed, by keeping issues alive. This can sound both idealistic and simplistic, but seems worth pursuing so that, for example, the statistics used in policy-making are also those available to assess the performance of government. It assumes that a distinction can be made, and recognised, between opinion and fact. As the masthead in the Guardian newspaper puts it, “Comment is free … but facts are sacred”. Problems arise when facts get caught up in social conventions which restrict the range of statistics available or, if they are available, how they are presented, consulted, and used. A particularly challenging aspect of official statistics is to provide statistics that can be used by all sides of a debate, including by those who
want to speak truth to power, especially the power manifest in government, on issues such as poverty, homelessness, and government spending. Scott has studied how sustainability indicators are used in decision-making at all levels, including the production of many community quality of life indicators. She observes that “The debate and learning that occurred in the process of developing indicators became as important as the product itself” (Scott 2012, p. 46).

Second, and this may only happen relatively infrequently, to help build a national debate. We have in mind particularly the wide-ranging national debate on measuring national wellbeing, hosted by the ONS, with the strap line “What matters to you?” (Allin and Hand 2014, pp. 222–223). Other national statistical offices have undertaken similar exercises. This is not without challenges. During the development of an earlier set of sustainable development indicators, Custance and Hillier (1998, p. 287) wanted as one role of the indicators “to encourage individuals and businesses to recognize that their behaviour and choices have an effect, and we hope by highlighting those effects to influence them to behave in a more sustainable way”. But in presenting indicators “in ways which people can relate to their own experience”, not surprisingly, some compromise in scientific soundness had to be made in favour of indicators that resonated with people.

Third, a lack of statistics can signal that an issue is not being addressed. It can be instructive to consider what it means if something is not included in a nation’s set of official statistics. It seems to be a management consultancy mantra that what counts should be counted, but too often it is what is counted that counts. For example, a report in 1980 noted that although “a sizeable bank of official data on which to draw” in researching equality between women and men exists, it was the case that “the assumptions underlying the statistical portrayal of women are, at points, so divorced from reality as to be dangerously misleading”, such as that the chief economic supporter of a household is invariably male (Equal Opportunities Commission 1980, p. 1). Official statistics have developed in many ways over the last 40 years but there are still significant gaps, for example in measuring household work as a contribution to the performance of the economy. Moreover, as Caroline Criado Perez (2019, p. 1) demonstrates, there are many cases where the data used for policy, for resource allocation and other decision-making, reflects “men as the human default”.
These three categories suggest how statistics play (including by their absence) into the politics and problem streams of influence on change relating to wellbeing, as discussed by Bache and Reardon (2016, p. 148). Our fourth category is more practical, it is that official statistics can help drive the behaviour change envisaged in enacted policies. The popular view is that change needs to be led by and stimulated by government, that it is the role of government to improve wellbeing and sustainability in response to issues highlighted by experts, politicians and pressure groups, and specific events or other problems (Bache and Reardon 2016, p. 148). The work of official statistics is not finished when governments acknowledge the need for more sustainable development and act to encourage and reward sustainable business and household activity, for example redesigning transport networks or shifting to renewable energy. The full range of official statistics, including GDP but no longer led by it, needs to be presented, to allow trade-offs to be assessed and acted on by businesses and households. Changing how we live may not just be about stopping some things but also involve shifting the balance and changing priorities. This is a huge challenge to official statistics since, in our view, one of the reasons that the vision of UN fundamental principles of official statistics may be hard to realise is that statistical agencies do not have access to unlimited resources.

We concluded Chapter 3, on statistics in policy, with a brief mention of how policy is meant to lead to behaviour change. That is often seen as the way of changing society and of meeting goals such as the SDGs, through top-down approaches such as legislation, incentives, and nudges. On the other hand, it is at least an open question as to whether bottom-up activism, with individual people and businesses deciding for themselves, is also effective, for example in tackling the climate emergency. We have huge admiration for the insistence of Greta Thunberg (2019) that no one is too small to make a difference. Elsewhere there are many other practical solutions offered to individuals and households: one we spotted urged “persuade your neighbours to do the same”. We can see that official statistics can form part of the argument and rationale for change. It is less clear how they might be used after that. The Economist (2017) observed that “Social change often starts with a grassroots movement. It can promote new ways of thinking or reveal injustices that had long been ignored. New behavioural rules may follow. But if these emerging norms are not embraced by big parts of the population, they will not become
entrenched. And if transgressions are seen to go unremarked or unpunished, they will continue”. It seems all too easy for many of us to carry on living in the way we are used to, despite some acknowledgement that things could be changed for the better. What role for official statistics here?

What can companies do? Beyond GDP can be traced back in part to a reaction to neoliberalism ideology, especially aspects such as that publicly listed companies should direct their efforts purely to the benefit of their shareholders. This was said to lead to a drive for economic growth with no regard for wider impacts, be they benefits or dis-benefits. In response to that, and long pre-dating the SDGs, more businesses began giving attention to their social and environmental impacts. There is an increasing number of corporate, non-financial, or sustainability reporting approaches, such as guides published by www.accountsitingforsustainability.org, so that a business’s scorecard not only covers financial aspects but also “doing the right thing” in terms of sustainability. Orts and Spigonardo (2020, p. 10) talks of the need to reconcile profits with “sustainable well-being”. Companies, non-governmental organisations, individuals, and the Wellbeing Economy Governments (see Chapter 3) are working through the Wellbeing Economy Alliance (2020, p. 3) to “transform the economic system into one that delivers human and ecological well-being”. The Alliance has noted the need for “A strong and coherent knowledge and evidence base”, not only on the theory underpinning the wellbeing economy, but also that “the evidence base of what works in practice needs to be galvanised and proactively disseminated. There is also a need to explore and demonstrate the effectiveness of wellbeing economy approaches on a large scale” (Wellbeing Economy Alliance 2020, p. 5). Some businesses and educational institutions have engaged with the SDGs relevant to their activities, supported by a number of national and international initiatives. For example, the Global Reporting Initiative, a recognised sustainability reporting approach, and the United Nations Global Compact are collaborating to “accelerate corporate reporting on the Global Goals” (GRI n.d.). Alignment and standardisation across wider accounting frameworks are also being explored.

All of these initiatives and approaches start from a corporate decision to account to stakeholders—including their investors, employees, communities, regulators, and governments—in non-financial terms as well as standard financial reports. Where these wider reports are aligned with
SDGs, then they illustrate how the goals are being tackled and should help governments report on progress towards the goals. UNCTAD (2019, p. 18) has prepared guidance on this, based on “a limited number of core SDG indicators” and sees (Fig. 1) these indicators as assisting “Governments to assess the private sector contribution to the SDG implementation” and “entities to provide baseline data on sustainability issues in a consistent and comparable manner that would meet common needs of many different stakeholders of the SDG agenda”.

Widespread non-financial reporting in a consistent and timely way offers the prospect of aggregating costs and benefits to reveal national analyses of economic growth, social progress, and environmental impact. However, we have as yet no evidence of organisations referring specifically to published, national sustainable development indicators or linking their own performance metrics to these indicators, beyond the proposal in the UNCTAD guidance. In our view, this points to a clear role for national statistical offices to engage more fully with the world of non-financial reporting, including by recognising that businesses are increasingly linking their research and development to the SDGs relevant to them.

4.4 **The Role of Influencers and Intermediaries**

We take the optimistic view that there appear to be multiple opportunities for official statistics on wellbeing and sustainable development to be used in building the evidence base for decision-making, action and evaluation, at all levels of society. But our thesis is that having statistics available is not enough, we need to see them as tools for social change and use them as such. However, at the risk of labouring this point, official statistics are only part of the contemporary information space: the mirror held up by official statisticians does not stand alone and may not stand out. As novelist Olga Tokarczuk (2019, Part 2) put it in her Nobel Lecture: “The world is a fabric we weave daily on the great looms of information, discussions, films, books, gossip, little anecdotes. Today the purview of these looms is enormous - thanks to the internet, almost everyone can take place in the process, taking responsibility and not, lovingly and hatefully, for better and for worse. When this story changes, so does the world. In this sense, the world is made of words”. (Well, words and numbers perhaps, or including words about numbers).
But we again need to ask who is the “we” who are doing the weaving of multiple data and information threads? There is likely to be a spectrum of engagement, rather like the taxonomy of statistical users in Table 4.3 above. We have also observed that the interrelated topics of wellbeing, progress, and sustainable development have gained a number of intermediaries and change-influencers. There are many storytellers, compilers of statistical compendia painting fuller pictures of societal development. They are curators, drawing from the available sets of statistics. For example: Prescott-Allen (2001, p. 4) compiled an index of quality of life and the environment for the 180 countries for which data could be obtained on at least half the indicators in his model; Briscoe (2005, p. ix) prepared a volume of the “essential statistics” for Britain because “despite seeing more and more figures being published every year, people are often no clearer about the important trends in our society”; and Ahsan and Tweed (2015) produced a statistical snapshot of Canada to coincide with national day. As one-off publications, these have a relatively short “shelf-life” as topical accounts though they remain as useful archival sources of how the compiler saw the wellbeing of the nation at a point in time. This is perhaps being a little unfair: Pinker (2018) for example generated considerable debate over the extent to which his choice of metrics showed progress over 250 years.

There are also intermediaries who appear to seek to influence with a more overt policy agenda. These may be thought of as examples of the policy entrepreneurs who “promote pet proposals, [and] frame problems in particular ways” in looking at wellbeing (Bache and Reardon 2016, p. 148). These are invariably ongoing projects, updated by drawing on the latest official statistics and other surveys. They undoubtedly bring official data to wider usage, where they include it, and help drive debate about wellbeing and progress. Examples include:

- the annual Legatum Prosperity Index™, with the ambition that “leaders around the world use it to help set their agendas for growth and development, and also to enable others to hold them to account” (Legatum Institute 2019, p. 4);

- the Social Progress Index (https://www.socialprogress.org/), a “new way to define the success of our societies. It is a comprehensive measure of real quality of life, independent of economic indicators … designed to complement, rather than replace, economic measures such as GDP”;


• “How’s Life?” is a statistical report, released by the OECD every two years or so (e.g. the fifth edition OECD 2020). It seeks to chart “whether life is getting better for people” in 41 countries and is based on a multi-dimensional framework covering 11 dimensions of current wellbeing and four different resources for future wellbeing. The reports are complemented by online material including the interactive Better Life Index (http://www.oecdbetterlifeindex.org/);

• the City Health Dashboard evaluates 36 key measures of health for 500 US cities. The purpose of this dashboard, built and maintained by academics with practitioner and foundation support, is “to be a tool for those on the ground to make better informed decisions about the things that most affect their local population”. The dashboard itself has then been mediated for patients, doctors, and healthcare specialists by other organisations, for example by Chicago Health (Mueller 2018);

• Refinitiv™ is one commercial agency assessing the performance of companies for their clients, in this case using over 400 metrics covering environmental, social, and governance dimensions (https://www.refinitiv.com/en/financial-data/company-data/esg-research-data).

All of these examples define wellbeing and progress in their own terms, albeit drawing on earlier research and engaging with stakeholders. This contrasts with the approach of some national statistical offices, including the UK Office for National Statistics in its What Matters to You? exercise, to engage with the public to define national wellbeing. All of this is radically different from the UN’s 2030 agenda discussed earlier, in which sustainable development goals and supporting checkpoints were agreed through a political process before metrics were put in place. This still requires bringing the goals and the indicators to as wide an audience as possible, for which one key intermediary is the UN’s own Project everyone (https://www.globalgoals.org/project-everyone) supported by marketing and communication initiatives.

However, in terms of moving the focus in policy, business, and everyday life onto wellbeing, the approach generally is to change the metrics before changing things for real (e.g. Bache and Reardon 2016, pp. 67–70). The established sequence seems to be: design a new measure; seek to gain consensus and acceptance of the measure; then work to solve
the social problem that was initially identified as requiring action (e.g. see Barnard 2018, on poverty in the UK).

4.5 Trust in Official Statistics

It is far from easy to build an understanding of how or why official statistics are used, either as products in their own right or as one of the inputs to more complex decision-making. One difficulty is that the term “official statistics” is not always used when official statistics are being referred to. For example, Jess Phillips (2019, e-book location 1444), a member of the UK Parliament, gave just one mention to using “statistics” when “trying to tell the story so that people can see it and easily understand it” while speaking truth to power. However, she also refers to census data, which are official statistics, several times (e.g. location 702) and also recalls that much of her work as an equalities campaigner involved identifying the data that businesses and government organisations “are not collecting by finding the gaps. Very often injustices are hidden in things that weren’t recorded properly” (location 732). We may be reading too much into examples like this, but they do perhaps point at least to some acceptance that official statistics are to be trusted and used.

Do official statistics have a competitive advantage in the contemporary information space? As O’Neill (2002, p. 68) notes, “the very technologies that spread information so easily and efficiently are every bit as good at spreading misinformation and disinformation”. The UNECE (2018, p. 2) takes what might be called the producer view: the advantage is that “Official statistics are produced in a professionally independent way based on scientific methods, rigorous quality criteria, including relevance, and the Fundamental Principles of Official Statistics. Upholding these principles is essential to any country seeking to understand itself and respect the rights of its people”. Here relevance and utility are melded into the assessment of the quality of the statistics, as would be done in thinking about the fitness for purpose of any product. In practice, as we discussed in Chapter 2, this often leads to the “field of dreams” approach, of building statistics and believing users will find them and trust them.

However, if we come at the question of competitive advantage in another way, we find more that official statisticians can do to hone their competitive advantage and extend their outreach. The mandate for official statistics, as set out in the UN fundamental principles, can be considered delivered only if the statistics hold up against three tests (OSR 2019, p. 2):
• Trustworthiness: Confidence in the people and organisations producing statistics;
• Quality: Data and methods that produce assured statistics; and
• Value: Statistics that support society’s needs for information.

O’Neill (2002, p. 64) explains why trustworthiness is important: “Reasonably placed trust [i.e. of users] requires not only information about the proposals or undertakings that others put forward, but also information about those who put them forward”. There were a number of national surveys on public trust in official statistics, from which the OECD developed a model questionnaire for measuring trust in official statistics. The UK Statistics Authority commissioned an independent social research organisation to undertake surveys in, to date, 2014, 2016, and 2018, and there was a survey with a somewhat different set of questions in 2009. Morgan and Cant (2019, p. 13) report that “Trust in ONS as an institution remains high – 88% of those who expressed an opinion either trusted it a great deal or tended to trust it. However, nearly a quarter (24%) did not express any opinion – stating that they did not know whether or not they trusted ONS”. Taking these two proportions together suggest that two thirds (67%) of the British public would say that they trust the ONS.

The surveys on public trust also measure awareness and self-reported use of official statistics. For example, “Public awareness of ONS remains relatively high, at 69% - a similar level to that seen in 2016 and 2014” and “Just under a quarter of the British public (24%) report that they have used statistics produced by ONS”. Usage breaks down as 4% of the public are frequent users, 14% are occasional, and 5% last used the statistics more than 5 years previously (Morgan and Cant 2019, pp. 9–11).

In a Eurobarometer survey in 2015, undertaken on behalf of the European Commission, citizens in all the then 28 European Union countries were asked about their knowledge and understanding of economic statistics and whether they trust them. The survey was framed around three key economic indicators, the growth rate, the inflation rate, and the unemployment rate. (We earlier mentioned these three areas as likely to have high media profile). As with other exercises to test knowledge about facts about society, respondents were generally not very accurate in the numbers they volunteered for these particular statistics (TNS 2015, pp. 4–13). The headline result for trust was that half of Europeans do not trust these official statistics, with the proportions tending to trust them varying
between countries, from 73% in Sweden down to 27% in Spain, and 44% in the UK (pp. 19–20).

Surveys of knowledge, use, and trust of official statistics can be mined for many insights about the relationship between official statistics and the public. We leave that for others and draw attention to just two points. First, only a small proportion of the public describe themselves as regular users. Second, trust levels vary greatly, between countries, between people of different ages, and across socio-professional categories. There seems to be more for statisticians to do to raise the profile and the trustworthiness of official statistics.

### 4.6 Conclusion: Better Engagement Between Producers and Users of Official Statistics

Official statistics should be put to work more. Although the concept of the public value of official statistics is still under development (and actual valuations are rare), it is clear that there are many issues to address in the role of official statistics beyond public policy, in public debate, and in business. Many people appear unaware of official statistics in general, or at least of how to access the available statistics. We accept that there may be a degree of cynicism, reflected in the old line that statistics should be ranked third, after lies and damned lies. Statistical literacy and confidence with handling statistics are being addressed, if only slowly, and the misuse and abuse of statistics by the media and by politicians can be tackled.

But if we are to improve wellbeing and meet the sustainable development goals, we cannot leave it all up to governments and policy-makers. As George Monbiot (2018) forcibly puts it, “The task of all citizens is to understand what we are seeing. The world as portrayed is not the world as it is. The personification of complex issues confuses and misdirects us, ensuring that we struggle to comprehend and respond to our predicaments. This, it seems, is often the point”.

There is no grand theory of change with official statistics embedded in the process: we are simply reflecting the approach adopted in the fundamental principles of official statistics. There is considerable potential for statistics to give a wider picture of wellbeing and sustainable development, to be used as a common resource by policy-makers, civil society, and businesses.

We propose that better engagement between the producers of official statistics and users (and potential users) should be seen as the driving
force to deliver the potential of official statistics. As we reported above, current engagement on UK statistics is at best patchy. We are not in doubt that producers work hard at making their statistical releases as clear and unambiguous as possible when they publish them, and that the statistics are soundly based. But we suspect that, in doing so, producers are demonstrating “what linguists call ‘transmitter orientation’ – that is, it is considered the responsibility of the speaker to communicate ideas clearly and unambiguously” (Gladwell 2009, p. 216). Users, at least those tuned-into receive the statistics, will also tend to expect this. However, it seems as if statistical producers can then sometimes flip into receiver orientation and leave it up to the user “to make sense of what is being said”, rather than treating engagement with users as a dialogue. Moreover, this is a model of broadcasting to those who are aware, with no outreach to those who are not currently using the statistics.

Doing better may involve fairly straightforward actions, such as maintaining a calendar of past and planned statistics releases, and promoting the release calendar. It seems a little complacent to plan the orderly release of official statistics and claim transparency because there is a release calendar, but leave people to find it and not, as a matter of course, draw it to the attention of people and organisations who should find it useful. There is little evidence that official statisticians use approaches like the marketing funnel (e.g. Brooks 2019), defined (on Wikipedia) as “a consumer-focused marketing model which illustrates the theoretical customer journey towards the purchase of a product or service”. Although official statistics are invariably free at the point of delivery, this should not preclude the use of models like this to help raise their profile and increase their use.

All of this of course applies to all official statistics. In Chapter 6 we will discuss how to increase the public value of official statistics, with a special eye to two sets of statistics relating to wellbeing. One set comprises the sustainable development indicators that we discussed in Chapter 2 and that each country is committed to compiling, so that progress towards the global, sustainable development goals for the year 2030 is measured. The second set of indicators, found in an increasing number of countries, comprises its measures of national wellbeing. This set also allows for measuring progress by taking account of more than GDP, which meets another commitment captured in the UN’s 2030 Agenda.

Before then, we need in Chapter 5 to fill in a couple of stages in the process of delivering official statistics. These are the need to use new forms
and sources of data, with associated challenges as well as benefits, and the role of the media in disseminating official statistics.

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