



Survey Methodology: Challenges and Principles

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INTRODUCTION

There are a lot of reasons to publish a new handbook of survey methodology. Above all, the field of survey methodology is changing quickly in the era of the Internet and globalization. Furthermore, survey methodology is becoming an academic discipline with its own university programs, conferences, and journals. However, survey methodology could also be seen as a bridge between disciplines, resting on the shared methodological preoccupations between specialists of very different fields. These are some of the challenges we are addressing here.

Discussing the actual practices in many contexts is an invitation to think in a global perspective, along two directions. On the one hand, surveys are realized today all around the world in very different settings, which we call the globalization of surveys. But on the other hand, the 'Total Survey Errors' paradigm considers the complete survey life cycle and the interrelation of the different elements involved in the data collection process. That means that it would not be wise to pay too much attention to a single element at the risk of losing sight of the complete picture. This is of course valid for survey designers but also for estimating the quality and potential for use of existing surveys. A global perspective also requires a comparative frame. We even argue that integrating a comparative perspective from the beginning can enlighten many different aspects of survey design, even in a single national context.

These points will be developed throughout this handbook beginning in this introduction, with the idea of simultaneously providing a 'state of the art' and a perspective on the upcoming challenges. One important point in this respect is not to consider surveying as a technique but to consider it an integrated part of the scientific landscape and socio-political context. But first, we should explicate what we mean by a 'survey'.

WHAT IS A SURVEY?

The *Oxford Dictionary of Statistical Terms* begins with a broad definition of surveys: 'An examination of an aggregate of units, usually human beings or economic or social institutions' (Dodge 2010 [2003]: 398). Although many authors, such as Ballou (2008), agree on the polysemy of the concept, a more precise definition is given by Groves et al. (2004): 'A survey is a systematic method for gathering information from (a sample of) entities for the purpose of constructing quantitative descriptors of the attributes of the large population of which the entities are members' (p. 2). In this sense, the French word for survey, 'enquête', the same term used for a criminal inquiry, denotes well this systematic quest for information.

Sometimes 'surveying' is defined as obtaining information through asking questions, in line with the German word for survey: 'Befragung'. Dalenius (1985) recalls that observations are to be done according to a measurement process (measurement method and a prescription on its use) (Biemer and Lyberg 2003, see also Dodge 2010 [2003]: 399). That means that surveys defined in this sense share a lot of commonalities with other forms of data collection.

The idea of a systematic method for gathering observation includes for example exhaustive censuses as well as the use of a sample. In fact, some specialists explicitly limit surveys to data collection exercises conducted on samples (de Leeuw et al. 2008: 2). This handbook includes many chapters (Chapters 21, 22, 23) on the question of sampling, and the sample survey will be the first target, even though we see no reason to exclude by definition censuses which share a lot methodologically with surveys and are of great importance in the history of the quantitative observation of society.

'Quantitative descriptors' implies not only 'numbers' but also their interpretation, which in turn is placed in a broader interpretative frame. There is a process of operationalization that progresses from theory to measurement (Chapters 9, 14 and 34). In this sense, 'descriptors', i.e., point estimates, can only be understood by taking into account the structure and functioning of a given society. In other words, how to build the measure of 'items' is also one of the main topics to address, and a full part of the handbook is dedicated to survey-based measurement (Chapters 14–20). One strength of this handbook is the attention it gives to measurement and survey quality.

The definition of survey nevertheless excludes a lot of approaches useful for social research that are outside the scope of this handbook (but see Bickman and Rog 2009). Generally, qualitative methods are not considered, as we focus on quantitative descriptors. However, in certain parts of the survey life cycle, qualitative methods are well established and important to consider, such as in pretesting (Chapter 24). Along the same lines, 'big data', e.g., administrative data or data from the Internet, are not considered here because they are not organized a priori as a 'systematic model for gathering information'. to rephrase Dalenius. Nevertheless, such data are becoming vital to understanding social life, and must be taken as complementary with surveys.¹ In the last part of the handbook we will take into account the growing integration of surveys into a set of different sources of information (predominately Chapter 42, but also Chapters 40 and 41 in some aspects).

There are multiple ways of collecting information through surveys, and some distinctions between them are useful. Although a complete typology is outside the scope of this introduction, Stoop and Harrison (2012), for example, classify surveys based on the interrogatives *who*, *what*, *by whom*, *how*, *when*, *where* and *why*. Without mimicking their excellent chapter, we can discuss some lines.

In the 'by whom' category, different types of actors that sponsor activities can be mentioned:

- The scientific community tries to develop theory and analytical models in order to explain behavior, attitudes or values as well as the distribution of health, wealth and goods in given societies.

- The public administration; quantitative information is needed for governance – it is no coincidence that the words ‘statistic’ and ‘state’ have the same root – and an important task of a state is to assess the number of inhabitants or households it contains.
- Commercial enterprises need knowledge about their clients and their clients’ reactions to their products in order to be as efficient as possible in their markets.
- Mass media are a special actor in the survey field and were mentioned as a particular category already in the 1980s (Rossi et al. 1985). Sometimes, they use results of polls more as a spectacular result to gain an audience rather than as a piece of systematic knowledge about society. That is part of the debate about the concept of public opinion (Chapter 5).

This type of distinction is also of importance when thinking for example about ethical aspects of surveys (Chapter 7). Of course, the boundaries between these actors are not always clear and depend on the national context, at least for the relation between administrative organizations and academia, and this could be important for the definition of measurement tools (Chapters 5 and 20). Nevertheless, we can expect that these actors have different expectations of surveys, their quality and their precision. In fact, most of the examples used in this book are taken from the academic context, implying that we focus more on the link between theory and measurement (Chapters 9 and 14) than other indicators of quality used, for example, in official statistics.² This example also reminds us that no absolute criterion for quality exists independently of the goals. This is clearly stated in the definition of quality given by Biemer and Lyberg, ‘Quality can be defined simply as ‘fitness for use.’ In the context of a survey, this translates to a requirement for survey data to be as accurate as necessary to achieve their intended purposes, be available at the time it is needed (timely) and be accessible to those for whom the survey was conducted’ (2003: 9). This handbook has many chapters assessing data quality and aspects that can jeopardize quality (Chapters 34 to 39), an important aspect that must also be taken into account in the design state of a survey (Chapter 16 for example). This is of prime importance when developing the total survey error frame (Chapter 3).

We can further distinguish between the different ways to acquire information, the ‘how’ mentioned by Stoop and Harrison (2012). The first distinction is between modes of data collection, even though the boundaries between them are blurring, and multi or mixed modes are more and more often utilized (Chapter 11). We will come back to this later in the introduction when considering the development of surveys during the last century.

Who (or what) are the units of analysis of the survey, is another question. In most of the chapters in this handbook it would be individuals or households, but this is clearly a choice: a fairly big proportion of the surveys conducted by statistical offices are on establishments, even if it is individuals who give the information. In other cases we can aggregate information at some meso or macro level, such as occupations or regions. We include one chapter examining how survey data could be augmented by macro indicators (Chapter 42). Along the same lines, complex structures of data, such as members of a network or connections or interactions among these network members, as a basic unit is left to the specialized literature, such as the *Sage Handbook of Social Network Analysis* (Scott and Carrington 2011).

Stoop and Harrison also mention the time dimension as an important classificatory factor, the 'when', mostly to distinguish longitudinal and cross-sectional approaches. We cover the discussion on cross-sectional vs longitudinal survey designs in Chapter 9, and further details can be found in dedicated publications (e.g., Lynn 2009). But 'when' may also refer to the historical context (Chapter 8), a topic we turn to next.

SURVEYS IN HISTORICAL PERSPECTIVE

Though the idea of probability originated many centuries ago, and the art of counting people through censuses has been known for several millennia (Hecht 1987 [1977]), the modern survey, organized on the basis of a random sample and statistical inference, is more or less only one century old (Seng 1951; see also Chapter 21). Of course, some precursory works can be mentioned, such as for studying poverty or social mobility,³ as well as the so-called straw polls for prediction of political results. However, the use of a small random sample, for example to predict elections, instead of a large, but fallacious, non-random selection of cases, was proposed only in the interwar years (Chapter 8). More or less at the same time official statistics began using samples.

Even if the advent of modern surveying was relatively recent, it has experienced major changes during the last decades. It is interesting to quickly discuss these changes, as they have structured the way to realize surveys as well as the way to use them or even think about them. One aspect of this change can be seen in the predominant mode of data collection, which – at least for Western countries – shows the following sequence:

- Just after the Second World War, most surveys were conducted face to face or by mail if enough people were considered to be literate.
- One generation later, in the 1980s, the telephone survey was seen as a new and efficient technology, at least when the coverage was sufficient. In some countries it was obligatory to be listed in the telephone directory, which therefore was seen to constitute an excellent sampling frame.
- Another generation later, telephones seem more and more difficult to use, as mobile phones tend to replace landlines, and centralized directories are no longer available. With the spread of the Internet, the web survey is seen as THE new methodology to adopt, in particular when considering the price of interviewing.
- Nowadays, in a context of declining response rates (Chapter 27), in many cases the idea is that combining modes (Chapters 11 and 18) is the way to follow, either in order to contact the greatest possible part of the sample or to have the best cost/benefit ratio, such as by using adaptive sampling (Chapter 26). This also explains the choice in this handbook to discuss interviewer interactions and interviewers effects less in depth, as would have been the case in earlier works (e.g., Biemer et al. 1991), but to put more emphasis on quality in general.

All these points pose challenges for data collection, which the survey industry has had to overcome. This has

mostly resulted in adapting the field techniques to the changing circumstances. In particular, they must have been more transparent and more systematic but also more flexible.

Another story of change can be told in terms of the growing complexity of survey designs (Chapter 16), linked – once again – to the development of technology:

- At the beginning of the period considered here, after the Second World War, most surveys were single cross-sectional surveys. Their analysis was promising for the disciplines involved, and many important books were based on this type of information. The practical work of analysis was complicated enough with a single survey, in particular considering the (lack of) availability and ease of use of the computers needed for the analysis: software like SPSS was only developed in the seventies, and terminals with video displays became available more or less at the same time.
- In the next period, the time dimension gained importance, but under different modalities:
 - Repeated cross-sectional surveys were put in place in many countries, like the General Social Survey (GSS) in the United States, the British Social Attitudes (BSA) in Great Britain and the Allgemeine Bevölkerungsumfrage in den Sozialwissenschaften (ALLBUS) in Germany. This was also an important change because it was no more single researchers conducting scientific projects but a tool that had to serve an entire scientific community. In other words, that was the beginning of the implementation of infrastructures in this field.
 - Panel surveys, with multiple waves of data collection for the same respondents, have become more frequent. The Panel Study of Income Dynamics (PSID), running in the USA since 1968, is the longest-running longitudinal household survey in the world.⁴ Similar initiatives have been launched in other countries, like the German Socio-Economic Panel (G-SOEP), which has run since 1984; the British Household Panel Survey (BHPS), which began in 1991; or the Swiss Household Panel (SHP), running since 1999. Of course there were precursors to these big initiatives; for example, the NORC's College Graduates Study was begun in 1961. In another disciplinary field, we can also mention cohorts like the National Child Development study in the UK, based on a 1958 cohort, and the National Longitudinal Survey of Youth in the US (beginning in 1979). Most of these studies are further complicated by being household surveys following not only individuals but entire households, which of course change over the years, meaning they involve a very complex data structure.
- The next step was to introduce the comparative dimension, in addition to the time axis. Here we also have to mention three situations:
 - Comparative repeated cross-sectional projects. The European and World Values Surveys (EVS and WVS respectively) and the International Social Survey Program (ISSP) were put in place in the eighties, with precisely the idea to have a tool that allowed putting countries in perspective while evaluating change. Additionally 'barometers' have evolved in Europe and outside of Europe such as the Latino Barometer, Asian Barometer,⁵ Afro Barometer,

Arab Barometer and Eurasia Barometer. Both the East Asian Social Survey (EASS) and European Social Survey (ESS) were also built from the beginning with the same idea to measure social change while keeping strict comparability and high quality.

- Harmonization of national panel studies to allow comparability. This was the challenge of the Cross-National Equivalent File (CNEF),⁶ for example, pulling together, among others, the British (BHPS), German (G-SOEP), Swiss (SHP) and US (PSID) panels.
- Comparative panel surveys designed from the beginning in a comparative perspective. There are not many examples, but we can nevertheless mention the case of the Survey of Health Aging and Retirement in Europe (SHARE) and the European Statistics on Income and Living Conditions (EU-SILC).
- The tendency nowadays is also to combine different sources of data to exploit the growing availability of information, as well as to pursue a movement initiated some years ago by social scientists such as Stein Rokkan (Dogan and Rokkan 1969). Multilevel models are more and more often used in comparative projects, making use of data at the country level. Some other projects use other types of information at the contextual level, which could be not only geographic but linked, to mention some examples, to social networks or to occupation. Other examples include the ESS which tracked the main events arising during the fieldwork period or the CSES which integrates not only geographical but also institutional information. SHARE is integrating not only answers to questions but also biomarkers which will probably gain even more importance in the development of health-related surveys these next years. This is described in Chapter 42, among other projects.
- A further sign of growing complexity comes from the fieldwork which in recent years has given more attention to paradata giving supplementary information on respondents and the contexts in which they live. These data are a potential basis to identify and correct biases (Kreuter 2013) but also provide a means to improve fieldwork monitoring and adapt to the best design (Chapter 26). Control of the production process is an important aspect of survey quality (Chapter 25; see also Stoop et al. 2010).
- In recent years, another type of survey based on the Internet has gained visibility – on-line or access panels:⁷
 - These panels typically are opt-in surveys meaning that potential respondents sign-up for them. This allows for conducting very cheap surveys on a large number of respondents that can be in the range of 10,000 to 100,000 panelists. Being a self-selected group, coverage of the population usually is poor and though companies try to improve representativeness by weighting according a few socio-demographic variables external validity typically is a problem. This therefore calls into question the quality of such surveys.
 - In reaction to such a model, academic-driven surveys began to use an offline random recruitment process, called probabilistic panels. This strategy tries to combine the advantages of Internet surveys, which are cheap and easy to set up, and those of true random sampling. One of the most famous is probably the LISS panel, which has run in the Netherlands since 2007 (http://www.lissdata.nl/lissdata/About_the_Panel), but similar

experiments are running in France with the ELLIPS initiative (<http://www.sciencespo.fr/dime-shs>) and in Germany with the German Internet Panel (http://reforms.uni-mannheim.de/internet_panel/home/) and the GESIS panel (<http://www.gesis.org/unser-angebot/daten-erheben/gesis-panel/>). The rise of these Internet surveys does not mean that some other aspects of survey design, such as sampling (Chapter 22) as well as attrition and selection of respondents, are totally solved.

Looking at the history of surveys, there is something a little bit paradoxical: the recent proliferation of surveys, mainly Internet surveys, without random sampling or a clear description of the inference possibilities, put forward data by emphasizing the number of respondents more than the quality of data. This in a sense harkens back to the situation of the thirties and the discussion about the Literary Digest poll, although there is perhaps a difference: we now have a better knowledge of non-probability sampling (Chapter 22) and conditions of use.⁸

In this history, we can mention a last important distinction, between data produced by design, when a survey is designed according to a specific goal, and data produced by a process like administrative data or even the 'big data' mentioned earlier. At the time of writing, it does not seem useful to us to claim the superiority of one type of data over the other in an historical, or prospective, perspective, but it seems to us more important to think about the articulation between the research question and the way to answer it, in function of the available sources of information, but considering also considering the limitations that each kind of data may have.

A DISCIPLINE WITHIN DISCIPLINES?

The first survey practitioners were first of all substantive researchers who were learning methodology by conducting surveys and accumulating experience. In this sense, in the middle of the last century, surveying was something like a craft or an art. For example, a famous book of Stanley Payne (1951) was precisely entitled *The Art of Asking Questions*. Survey methodology began to cumulate as a discipline later on; for example, the first handbook was published in the eighties (Rossi et al. 1985). In order to move from an 'art' or a 'craft' to a 'science', there was therefore a need for a unifying paradigm. Total survey error was a perfect candidate for this (Chapters 3 and 10).

Survey methodology tends more and more to be seen as a discipline of its own: it has its own journals, such as *Public Opinion Quarterly* (POQ), *Survey Research Methods* (SRM), and the *Journal of Official Statistics* (JOS); its own conferences and associations, including the American Association for Public Opinion Research (AAPOR), European Survey Research Association (ESRA) and World Association for Public Opinion Research (WAPOR); as well as handbooks, this one being one of them. These associations have contributed to establishment of standards for the discipline (Chapter 2). This is also the case for market-oriented associations (Chapter 7).

But survey research is also a bridge between disciplines. For example, medical cohorts and sociological panels use the same methodology and they could begin to speak to each other just because they share so much in terms of data collection and analysis.

It is nevertheless important to recall in this context that methodology is also deeply embedded into disciplines. In this context, it is probably vain to develop a methodology for methodology, independent of the substantive goal of the research. There is always the risk of development inside an ivory tower without taking into account the most important social and scientific challenges. For this reason we argue that a comparative perspective in methodology is a way to reflect about the limits and conditions for the validity of survey results and, as such, a very important safeguard. In other words, methodology must be open to the preoccupations of the other disciplines and keep a broad perspective. Methodological excellence will also be better accepted by substantive researchers if it shares, at least in part, the same disciplinary vocabulary and preoccupations. Survey research is therefore positioned in an area of tension between methodology on the one hand and substantive research on the other. But the reverse is true also: from a substantive researcher point of view, it is important to be aware of data quality and, more generally, of the question of how much methodology affects empirical results.

We should not only consider if survey methodology is a discipline by itself or a specific field of expertise within several disciplines but also to take into account that some disciplines are sources of support for solving problems specific to survey methodology:

- The first discipline to mention is statistics, which can sometimes be seen as part of mathematics but also has its own position in the scientific landscape. From our point of view, statistics is important not only for sampling or data analysis but also for proposing tools for measurement (Chapter 17) and estimation of quality (Chapter 34).
- Psychology and in particular cognitive psychology as well as social psychology can be seen as a key when looking at the modeling of the answer process and the interaction between interviewers and interviewees. These disciplines are also important when looking at models of answers, like in Chapter 15.
- Psychometry is important to consider in the discussion about measurement and measurement models (Chapter 17 or 34).
- Sociology and political science can be considered when trying to understand the differences in survey participation, for example, by social position. It could be inspired by theory, like the one of Bourdieu, but may also refer to the idea of social exchange models as posited by Dillman et. al (2014). Along the same lines, the study of housing and living conditions of respondents can benefit from the work of urban sociology in order to conceptualize lifestyle and social conditions (Smith 2011). But sociology and political science are also important when embedding the construction of indicators into social and political constraints (Chapters 5 and 20).
- Linguistics and translation studies are also important to consider for questions of formulation as well as tools when considering translations (Chapter 19).

Interdisciplinarity is important in this frame. It is one of the conditions needed to fruitfully integrate methods, statistics and disciplinary perspectives. However, for survey methodologists, it is also important to find a common paradigm in order to address the questions of survey research. That is precisely the goal of the Total Survey Error perspective already mentioned, but some remarks can be added here.

The discussion of survey quality, including how to develop reliable estimators and efficient tools, is probably as old as the history of surveys. A text of Deming (1944) is one of the oldest milestones along these lines; interestingly, it was published in the *American Sociological Review*. From this perspective, it is important to consider all the possible sources of errors, the way that they interact and can endanger, or not, the results as well as the conclusions that can be drawn from the data (Smith 2005). This is why Chapter 3 is dedicated specifically to considering the possible sources of errors, their consequences and their interrelations. This does not prevent us from dedicating a full part of this work to the different facets of data quality (Chapters 34 to 39).

This attention to data quality and its consequences is one of the characteristics of this handbook and is related to the other transversal theme: comparative design, to which the last chapter of each part is dedicated as well as a general chapter on challenges of comparative survey research (Chapter 4). This attention to comparison and comparability of course has a lot of consequences for the way we consider survey methodology.

COMPARATIVE FRAME AND THE NEED FOR MORE RESEARCH AND EXCHANGE BETWEEN CONTINENTS

For many reasons, to begin with the size of the scientific community and the need of information from the administration of a big country, survey methodology developed quickly in the United States after the Second World War. Part of this knowledge was 'exported' to Europe with the creation of important firms such as the IFOP with Jean Stoezel in France (Meynaud and Duclos (2007 [1985]) and the Allensbach Institute with Elisabeth Noelle-Neumann, both of which exchanged before with George Gallup (Zetterberg 2008; but see also Chapter 43). This movement of exportation and dissemination was of course primarily the case for 'opinion studies' rather than for official statistics, in which the various countries invested more energy in autonomous development.⁹

The origin and development of survey methodology inside the United States has had many consequences. A lot of studies have been established in a US context, but their validity in other contexts has not always been tested. This is the case, for example, for topics like the use of incentives (Chapter 28), for which we can expect that level of income and lifestyle are determinant. Along the same lines, a lot of studies are based on meta-analysis of published results and have never taken into account the cultural origin of the studies on which they were based. These are of course strong arguments to also consider and promote studies conducted in different contexts.

By the way, as mentioned in Chapter 43, surveys have been developed on all the continents. For example, the Global Barometer Surveys mentioned above that were inspired by the Eurobarometer now include Latino Barometer, Asian Barometer, Afro Barometer, Arab Barometer and Eurasia Barometer (<http://www.globalbarometer.net/>). The ISSP and the World extension of the value surveys also cover six continents since many years. This represents not only the dissemination of a technique all over the globe, which is interesting, but also the possibility of very interesting scientific developments (Haller et al. 2009). For example, to what extent can we compare different systems (Chapter 12)? What is the importance and impact of translation (Chapter 19)? What is the link between the general conditions of a country and the way of conducting surveys, either in drawing a sample or choosing the most adequate mode (Chapter 23)? The comparative perspective is clearly a central point here. Comparison is considered for the planning, measurement, use and quality of the survey process and the resulting data.

Another point can be mentioned here. Even though survey methodology is first of all a discipline founded on an empirical basis, there are still a lot of practical elements that are unknown and need to be explored, especially from a comparative perspective. For example, what is the relation between interest in a topic or in the questionnaire on the one hand and quality of response on the other? If such a question seems rather simple, there are still difficulties in measuring 'interest' in an appropriate manner. Likewise, even if the words in a questionnaire are chosen very carefully and discussed between experts after extensive cognitive testing or pretesting, there is still room to discuss the choice of a particular wording. This kind of information has to be documented in depth and published in order to allow scientific validation. In this context, it is a little bit astonishing that experiments in survey methodology are less often archived and re-analyzed than substantive surveys, even though the survey methodologists are probably the people most trained to do secondary analysis in an appropriate way (Chapter 40; see also Mutz 2011).

Once again, the comparative dimension adds a level of difficulty here: what is true in a given context is not necessarily true in another one (Chapters 12 and 13). That means that a lot of experiments and empirical analysis have to be multiplied in different countries before solutions can be adopted or adapted. As mentioned, the incentives presented in Chapter 28 have been until recently only discussed in a US context, without knowing how appropriate it would be to implement them in the same way in Africa, Asia, Europe or South America. Another case could be item validity, which may vary by behavior patterns or rules of social exchange deeply embedded in cultures. For example, the prevailing norm of 'saving face' during social interactions may lead Chinese respondents to give socially desirable responses during face to face interviews to an excessive extent.¹⁰ In some comparative surveys, such as the ISSP, a significantly large number of East Asian respondents also choose the mid-point response category (e.g., neither agree nor disagree) on attitudinal items, consistently refraining from revealing definite opinions. It also remains unknown how such cultural differences could be taken into account for comparative survey studies. Similarly, linguistic properties of questions and wordings are far better known in an Anglo-Saxon context than in other languages. In other words, we still have to make progress in order to find functional equivalence between countries when designing surveys (Chapters 19 and 33).

But insisting on the difference of conditions between countries is also an invitation to examine the importance of differences between different social groups inside a country, in terms of shared validity and reliability, as well as functional equivalence. In other words, if we follow such an idea, every survey is comparative by nature! That means that considering the challenges posed by multicultural surveys also make us aware of the heterogeneity of conditions and of respondents in each national context.

USE AND USEFULNESS OF SURVEYS IN A CHANGING WORLD

We have already mentioned the usefulness of surveys, a minimal proof being the development of the discipline. Let us discuss some points about this in more detail:

- In any country the statistical office and other governmental agencies are an important source of information needed for governing and for making informed decisions. For example, the European Commission conducts the Eurobarometer in order to gain regular information on the attitudes of Europeans. More generally, the use of statistical data is part of a movement wherein decisions are based on information and facts. All of the social reporting movement and evaluation studies are based on this line of reasoning. 'Evidence-based policy' is similarly in line with the push for 'evidence-based medicine' and the recent developments around genomics could be a further incentive in this sense.
- A lot of scientific work has been developed on the basis of the Comparative Study of Electoral Systems (CSES), ESS, E(W)VS and ISSP, to mention four important international comparative projects. Combining these sources, there are probably more than one thousand comparative journal articles published each year, showing the integration of survey methodology in the scientific activity of social sciences today, especially in a context of comparison. This is not only a benefit in terms of knowledge of the social system of the countries concerned, but also considering that of sharing methodological excellence and innovations between researchers. That means that the use of these important surveys increases the level of knowledge and competences inside the scientific community of the participating countries. The encouragement of data infrastructures in Europe, including data production with projects like ESS or SHARE and through the creation of ERICs,¹¹ is probably one more sign of the vitality of surveys as a tool for knowledge production in the academic field, at least in an European context.
- The relation to the media is sometimes more ambiguous, also because of the question of the accuracy of electoral predictions, sometimes based on surveys lacking the necessary transparency (Chapters 2 and 5). On the other hand, the question of feedback to citizens and participants in surveys is clearly an important point and it is even sometimes seen as a crucial element of a democratic system (Henry 1996). This is also part of the idea of a 'survey climate' developed in Chapter 6, at least if we think that discussion about surveys and feedback to the people participating are part of a democratic culture (Chapter 5).
- We have already mentioned the close relation between the words 'statistic' and 'state', which clearly

puts on the agenda some concepts related to political science. Four aspects at least are of interest here.

- Surveys are part of the democratic system, in which everyone must have the right to express his or her own opinion. In this sense, every act against freedom of expression is problematic, and surveys are clearly relevant in the context of establishing democracy (Chapter 5).
- There is also another link between surveys and democracy, as in many cases surveys mimic democracy by following the model 'one (wo)man, one vote', which we find when each adult inhabitant of a country has the same probability of being invited to participate in a survey.
- Along the same lines, potential respondents have some rights: the right not to answer and the right to receive feedback about the results of what has been done with the information given. More generally, for the respondents, taking part in surveys entails a cost that must be acknowledged by carefully considering asking only meaningful questions.
- But surveys are also ways of forming opinions and are not a purely neutral tool of observation. As mentioned in Chapter 20, there is a performative effect in the definition and use of categories and subjects to be asked about. More generally, there is a stream of research that questions the relation between surveys and public opinion or even the pertinence of the latter as a scientific concept.¹²

In fact, presented in this way, survey methodology can be not only seen as an interdisciplinary field but even considered in terms of transdisciplinarity (Hirsch Hadorn et al. 2008), which means taking into account the social conditions in which interdisciplinarity operates. We hope to have demonstrated in this handbook the interest in discussing surveying from a methodological point of view as well as from a far more general perspective, including social and political challenges. The condition for this is the practical possibility of using the information contained in surveys in the most pertinent way. Above all, that means documentation of the data and their conditions of production (Chapter 29) as well as good practices of analysis (Chapters 30, 31 and 32).

ORGANIZATION OF THE HANDBOOK

The handbook begins by introducing basic principles in Part I. It also introduces readers to the two main organizing principles: the idea of total survey error and the comparative perspective.

Part II underlines that surveys are not just a technical tool described by a simple methodology but that they are anchored in societies and historical contexts. They are useful for many actors, such as the state, and also have an impact because they have developed in a historical context. That is one reason that allows us to speak about 'survey climate' (Chapter 6) and one more reason to take into account ethical issues (Chapter 7).

The remainder of the handbook follows a simple flow model of conducting a survey: planning a survey, deciding about measurement, choosing a sample method, thinking about specific features of data collection,

preparing the data for use, and finally assessing and, where possible, improving data quality. The questions that are posed and that have to be answered in each of these steps are even more challenging if a survey is to be carried out as part of cross-cultural, comparative research. Therefore, this particular aspect is, as mentioned earlier, dealt with in specific chapters discussing the particular challenges of comparative survey research in the different phases of the survey process.

The next chapters are dedicated to planning a survey (Part III). In this part, the research question that drives the choice of a suitable survey design has to be made explicit. A specific survey mode or modes is also to be determined. It also covers a discussion of the total survey error paradigm in practice as well as a discussion of surveying in multicultural contexts, with an emphasis on doing surveys in difficult situations.

The chapters in the remaining parts discuss more specific aspects of the survey process through the question of measurement on the one hand (Part IV) and of sampling on the other (Part V), which are the practical tools that surveys require. Finally, specific issues in the data collection phase are discussed (Part VI). From the total survey error perspective, all the different steps are important when it comes to assessing the final quality of the outcome. In other words, a survey is always a combination of interlinked steps and its finally achieved quality depends on the weakest one.

Data are of no value if they are not used. That is why a lot of people put a lot of effort into making data available for secondary research. This of course implies properly documenting the data, organizing access to them and respecting the characteristics of the samples through weighting as well as ensuring comparability. Preparing data for use is covered in Part VII.

Quality can be threatened by a number of factors. Detecting, and hopefully correcting for, the potential biases is central in this respect. Part VIII addresses this in terms of measurement questions, non-response and missing values, as well as comparability challenges.

Part IX is dedicated to further issues. As mentioned, they can be divided into three components: better use of resources, beginning with secondary analysis, putting together different sources, comprising the different ways to link data and framing all that in a process of globalization of science and surveying.

For us as editors an important contribution of this handbook is not only to give tools to solve problems but also to offer elements to frame surveys in a more general context, allowing methodology and scientific practices to be linked in the most fruitful ways. One of the most challenging developments in the near future will be to combine data from different sources including surveys. However, we firmly believe that the survey model based on a random sample of a population will continue to play an important role in the advancement of the social sciences and knowledge society in general.

Notes

¹A report recently published by the AAPOR writes, 'The term Big Data is used for a variety of data as

explained in the report, many of them characterized not just by their large volume, but also by their variety and velocity, the organic way in which they are created and the new types of processes needed to analyze them and make inference from them. The change in the nature of the new types of data, their availability, the way in which they are collected, and disseminated are fundamental'. And, as a recommendation: 'Surveys and Big Data are complementary data sources not competing data sources' (AAPOR report on big data, 12.2.2015, accessed 29.2.2016 from https://www.aapor.org/AAPOR_Main/media/Task-Force-Reports/BigDataTaskForceReport_FINAL_2_12_15_b.pdf).

²See for example *Quality Assurance Framework for the European Statistical System*, version 1.2, edited by the European Statistical System, <http://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V1-2final.pdf/bbf5970c-1adf-46c8-afc3-58ce177a0646>, accessed 28.11.2015.

³For poverty see for example Bowley (1915; discussed in Kruskal and Mosteller 1980). For social mobility, some Scandinavian studies of the nineteenth century are mentioned by Merllié (1994). We can also think of the works of Galton and Pearson on the transmission of quality between generations, as reported for example by Desrosieres (2002). For general histories of survey research see Oberschall (1972) and Converse (2009).

⁴Cf. <https://psidonline.isr.umich.edu/>, accessed 3.12.2015.

⁵Asian Barometer (<http://www.asianbarometer.org/>), a partner in the Global Barometer network, is not to be confused with Asia Barometer, an independent regional comparative survey network jointly sponsored by governmental agencies and business firms in Japan (<https://www.asiabarometer.org/>).

⁶See <https://cnef.ehe.osu.edu/>, accessed 3.12.2015.

⁷See also the ISO norm, http://www.iso.org/iso/catalogue_detail?csnumber=43521, accessed 14.1.2016.

⁸See the AAPOR report on the use of non-probability sampling, http://www.aapor.org/AAPOR_Main/media/MainSiteFiles/NPS_TF_Report_Final_7_revised_FNL_6_22_13.pdf, accessed 29.2.2016.

⁹This question of different development between the academic world, the private survey organizations and the national statistical institutes is still of relevance and was one of the reasons for the launch of the Data without Boundaries project (DwB) in the context of the 7th framework program of the European Union.

¹⁰For theoretical arguments about such social norms, see Hwang (1987).

¹¹For these institutions see for example https://ec.europa.eu/research/infrastructures/index_en.cfm?pg=eric, accessed on 26.12.2015.

¹²In the French tradition, such a critical perspective exists in the stream initiated by Bourdieu in 1972 in the famous paper 'L'opinion publique n'existe pas' (reproduced at <http://www.homme-moderne.org/societe/socio/bourdieu/questions/opinionpub.html>, accessed on 26.12.2015). More recently see also the work of Blondiaux (1998). In English we can mention Bishop (2004).

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