

SOCIAL RESEARCH METHODS



Sigmund Grønmo

Second
Edition

SOCIAL RESEARCH METHODS

Qualitative, Quantitative and Mixed Methods Approaches

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CONTENTS

<i>Preface</i>	vii
<i>About the author</i>	ix
<i>Your online resources</i>	xi
Part I Researching society	1
1 How and why we study society	3
2 Methods and methodologies in social science	29
3 The ethics and politics of research	53
Part II Designing social research	73
4 Creating research questions	75
5 Doing a literature review	97
6 Choosing a research design	119
7 Finding sources and data	139
8 Sampling	165
Part III Data collection and data quality	191
9 Ethnography and participant observation	193
10 Structured observation	211
11 Unstructured interviews and focus groups	223
12 Questionnaires and surveys	239
13 Documentary sources and qualitative content analysis	263
14 Quantitative content analysis	279
15 Collecting qualitative and quantitative data: Comparisons and combinations	295
16 Data quality, reliability and validity	313

Part IV Data analysis	339
17 Qualitative data analysis: Coding, categorization and concept development	341
18 Qualitative data analysis: Typologies, hypotheses and holistic understanding	355
19 Quantitative data analysis: Indexes and distributions	373
20 Quantitative data analysis: Relationships between variables	397
21 Generalizing empirical findings	427
22 Analysing qualitative and quantitative data: Comparisons and combinations	453
Part V Asking and answering questions in social science	471
23 Description, explanation and understanding	473
24 Time, space and level	497
25 Relations, networks and structures	517
26 Big data and computational social science	535
Part VI Writing and presenting research	551
27 Working with data visualization	553
28 Writing about research	573
<i>Glossary</i>	599
<i>References</i>	615
<i>Index</i>	629

PREFACE

This book provides an introduction to social research methods for university and college students. The purpose is to describe and discuss methods that are used in different social science disciplines and in multidisciplinary fields based on social research methods. The book contains a number of examples of how various methods are used in different disciplines and fields. In addition to examples from actual research, each chapter presents learning objectives, chapter highlights, student exercises and questions, as well as recommended literature for further reading.

Methodological and ethical issues in social science are discussed, and methods for designing and implementing social science studies are examined. The book presents methods and methodological concerns related to the main elements of the research process, from formulation of research questions and construction of research designs through collection and analysis of data to interpretation of findings and presentation of results. Throughout the book, qualitative and quantitative approaches in social research are described and compared, and reasons and strategies for combining the two approaches in mixed methods research are presented.

This revised and updated edition of the book differs from the first edition in many ways. The whole book has been systematically reviewed, and parts of the text have been revised and rewritten. The discussions of some topics have been expanded, and discussions of some new topics have been added.

Part III, on data collection and data quality, and Part IV, on data analysis, have been restructured. The order of the chapters on data collection has been changed. The chapter on mixed methods research in the first edition has been replaced by two chapters – one chapter on collection of data combinations, and one chapter on analysis of data combinations. Whereas the first edition had one chapter on analysis of qualitative data, the second edition includes two chapters on different methods and types of qualitative analysis. Instead of the chapter on statistical generalization in the first edition, the second edition has a new chapter on generalizing empirical findings, which covers not only statistical generalization in quantitative studies, but also theoretical generalization in qualitative research.

Compared to the first edition of the book, the second edition includes a large number of new research examples, which represent much more variety and diversity of social research, both globally and culturally.

The references and the lists of recommended literature have been updated. More recent publications have been included instead of older books and articles.

The number of overviews, illustrations and visualizations has been considerably increased from the first edition to the second.

The book is based on my experiences from social research and teaching of social research methods at several universities in different countries since the early 1970s. Contact, communication and interaction with colleagues and students at these universities have been extremely valuable. During the work on this book, I have been affiliated with the University of Bergen, Sámi University of Applied Sciences, and Institute for Social Research in Norway, James Cook University and Charles Darwin University in Australia, as well as the University of Cambridge in the UK. I am very grateful to these inspiring academic environments.

Most of the chapters in the book are based on the second edition of a similar book, which I published in Norwegian in 2016 (*Samfunnsvitenskapelige metoder*). I want to thank the Norwegian publisher, Fagbokforlaget, for permission to publish this book in English. Although these chapters have been partly rewritten, and some new chapters have been added in this book, English translations of most chapters from the Norwegian edition have been very useful in my work on the book. Many thanks to the translator, Diarmuid Kennan.

I have received support and comments from several colleagues. In particular, I want to thank Maria Iacovou, Ann Nilsen, Trond Petersen, John Scott and Bernt Aardal. Several anonymous reviewers have given very valuable comments at different stages of my work on the manuscript, for both the first and the second edition. The Sage editorial team in London has been very helpful and supportive during my work on both editions.

Finally, I am very grateful to Eirun, for her patience and support.

Sigmund Grønmo

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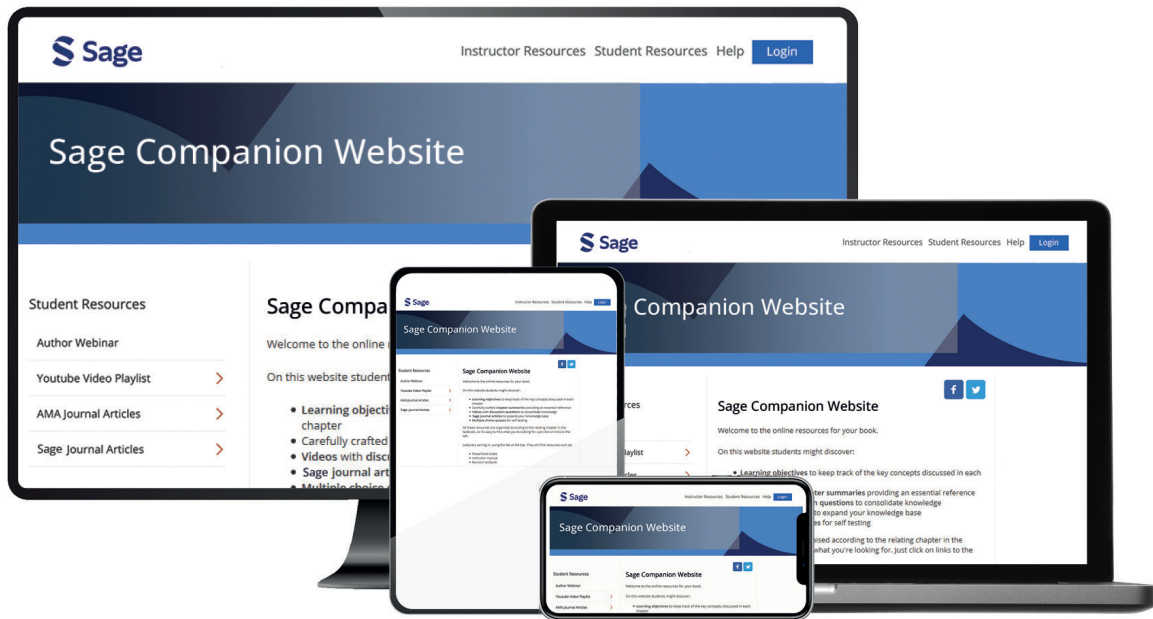
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For lecturers

A detailed **Lecturer's guide** supports you to teach using the book, featuring key learning objectives, teaching suggestions, tips for assessment, as well as additional resources for every chapter. Each chapter is also accompanied by further reading and videos alongside questions for class discussion, and several chapters include datasets that can be used to practice methods of analysis.



PART I

RESEARCHING SOCIETY



1

HOW AND WHY WE STUDY SOCIETY

Chapter outline

1.1	Learning objectives	4		
1.2	Science on society	4		
1.3	Why is social research important?	4		
1.4	Why is it useful to study social research methods?	7		
1.5	Dynamics of bureaucracy: Example of a classical social science study	7		
	Background and purpose of the study	8		
	How the study was implemented	8		
	Results and importance of the study	8		
1.6	What is social science?	9		
1.7	Social science and society	11		
	Participants and observers	11		
	Debate about positivism	12		
1.8	Qualitative and quantitative studies	13		
1.9	Facts and values	16		
	Empirical and normative studies	16		
	Do facts exist?	16		
			Classical discussions of the relationship between facts and values	17
			Basic principles for social science: Ontology, epistemology and methodology	18
		7	1.10 Social science as a process: The organization of this book	20
		7	Researching society	20
		8	Designing social research	21
		8	Data collection and data quality	22
		8	Data analysis	23
		9	Asking and answering questions in social science	24
		11	Writing and presenting research	25
		12	Major elements in the research process	26
		13	1.11 Chapter highlights	26
		16	1.12 Research examples	27
		16	1.13 Student exercises and questions	28
		16	1.14 Recommended literature	28

1.1 Learning objectives

This chapter provides knowledge about the essential features of social science and its relationship to society, as well as some fundamental methodological issues and principles in social science.

The chapter will teach you about

- how social phenomena can be examined by means of different methods
- the difference between qualitative and quantitative data
- the researcher's roles as participant and observer
- the relationship between facts and values in social science
- debates on fundamental issues in social science, including positivism and postmodernism
- basic principles for social science, including the principle of truth as a primary value.

1.2 Science on society

Social science is based on systematic research about phenomena and conditions in society. Social science consists of the methods that are developed and applied in this research, as well as the knowledge and theories that are the results of the research. This book is focused on social research methods. Different methods will be presented and discussed, and in order to show how these methods have been used, the book will also provide examples of knowledge and theories about society that are based on various research designs.

The selection of methods in social research is related to knowledge development and theoretical perspectives. In order to develop interesting knowledge and theories, it is necessary to use appropriate and adequate research methods. The selection of methods for a particular study depends on the kinds of social phenomena that are examined and

the kinds of social theories that are emphasized in the study.

This introductory chapter starts with discussions of why social research is important, and why it is useful to study social research methods. Then, an example of a classical social science study is presented. The example shows how different methods can be used to examine dynamic processes in bureaucracies. The next section presents a more general clarification of what social science is. Then, after a discussion of the relationship between social science and society, and the distinction between qualitative and quantitative data, the relationship between facts and values is examined. Finally, the chapter presents an overview of how the book is organized.

1.3 Why is social research important?

Like other scientific fields, social science is valuable in itself, as a part of the total culture in society, and it is important in a more instrumental sense, for the development of different social activities and for society at large.

Social science has been important for our identity and self-understanding, and for our understanding of interpersonal relations and society as a whole. Cultural, social, political and economic conditions are described and discussed by means of concepts and ways of thinking that have been developed within social science. Policies, strategies and decisions in different areas are often based on knowledge and theories from social science.

On the other hand, there are many policies, strategies and decisions in business, administration and politics that are not based on insight and understanding from social science. Social science also presents critical perspectives on many conditions and trends in society. Moreover, social science analyses and theories may be ambiguous and unclear as a basis for decisions in specific cases.

Such studies will often problematize conditions in society, rather than suggesting simple advice for actions or interventions. Typically, this reflects the fact that social conditions are both complex and complicated. Thus, social science is not always able to present clear and definitive conclusions. In any event, however, it may contribute to more insight and knowledge regarding different aspects of specific cases as well as social life in general.

Furthermore, different social science studies may present quite different analyses and interpretations of the same social phenomena. Different studies may emphasize different research questions, refer to different theories, apply different methods and end up with different conclusions. These differences are related to the great diversity in social science perspectives. However, even such differences between studies may be important and useful, since they demonstrate how social phenomena and conditions can be understood and interpreted in different ways, depending on the viewpoints of the researchers, the perspectives in the studies, and the premises for the conclusions. Thus, social science may contribute to informed, knowledge-based and rational public debates on various issues.

For example, perspectives, insights and knowledge from social science are very important for understanding and coping with the major global challenges in our time. One of these challenges refers to environmental issues, sustainable development and climate change. Whereas natural science examines such phenomena as global warming and how it is affected by emissions of carbon dioxide and other gases, social science provides knowledge about the human behaviour, social structures, economic conditions and political processes that lead to gas emissions and create other environmental problems. Social research can also describe and explain the consequences of climate change for people's living conditions in various parts of the world. Furthermore, social science is an important basis for discussing what kinds of action would be needed to reduce or prevent environmental problems that lead to global warming and global changes.

In general, social science deals with a large number of social phenomena and has resulted in a wide variety of findings about these phenomena. A few examples of topics and findings in recent social research is presented in Box 1.1.

Box 1.1 Examples of topics and findings in social science studies

Enthusiastic teachers are important for students' performance.

This is the main finding in a study of 48 biology teachers and their 1036 students in the US. The study shows a positive relationship between the teachers' enthusiasm for the subject (biology) and the students' performance, as well as a positive relationship between the teachers' enthusiasm for teaching the subject and the students' performance.

Mahler, Daniela, Jörg Großschedl, and Ute Harms (2018) 'Does motivation matter? – The relationship between teachers' self-efficacy and enthusiasm and students' performance', *PLoS one* 13(11), e0207252–e0207252.

Global inequality in education is explained more and more by variations within countries, rather than variations between countries.

This is the conclusion of a study of global trends in the period 1950–2010, based on analyses of data from a large number of countries across the world. The study shows that global inequality in education is explained more and more by variations within countries, with between-country inequality losing ground as a source of variation.

(Continued)

Permayer, Iñaki, and Diederik Boertien (2021) 'Global trends in education inequality', *Journal of Human Development and Capabilities* 22(4), 615–646.

There remains much to be done towards inclusion of LGBT+ people in sports.

This finding is based on five studies related to gender and sexuality in Australian sport. It is shown that structures of language, institutional organization and misaligned practices act as blocks to inclusion and fuel discrimination.

Storr, Ryan, Ruth Jeanes, Tony Rossi, and Lisa Hunter (2022) 'Are we there yet? (Illusions of) Inclusion in sport for LGBT+ communities in Australia', *International Review for the Sociology of Sport* 57(1), 92–111.

Victims of ordinary offline bullying are more likely than other people to become victims of cyberhate.

This is shown in a study of 1900 French students between 12 and 20 years old. According to the study, bullying and cyberhate are common experiences for quite a few young people, and there is an overlap between traditional bullying and cyberbullying.

Blaya, Catherine, Catherine Audrin, and Grace Skrzypiec (2022) 'School bullying, perpetration, and cyberhate: Overlapping issues', *Contemporary School Psychology* 26(3), 341–349.

People's use of social media is related to the users' personality traits: Extrovert, agreeable and conscientious persons use social media more than others, while emotionally stable and open persons use social media less than other people.

These relationships are shown in an analysis of data about 21,314 persons in 20 countries. The study examines relations between the 'Big Five' personality traits and key social media dimensions, including frequency of use, social interaction and news consumption. Across diverse societies, the analysis suggests that extraversion, agreeableness and conscientiousness are positive predictors of different types of social media use, while emotional stability and openness are negatively related to use of social media.

Gil de Zúñiga, Homero, Trevor Diehl, Brigitte Huber, and James Liu (2017) 'Personality traits and social media use in 20 countries: How personality relates to frequency of social media use, social media news use, and social media use for social interaction', *Cyberpsychology, Behavior and Social Networking* 20(9), 540–552.

Scepticism on climate change is more common in the US than it is in other countries, and such scepticism is least common in countries that are poor or much exposed to consequences of climate change.

This finding is based on a comprehensive survey of attitudes in 28 countries in 2019. Fifteen per cent of Americans believe either that the climate is not changing at all, or that it is not changing due to human causes. People in poorer countries or in the countries that are most exposed to the extreme weather events caused by climate change are the most likely to acknowledge the existence of climate change and the role humanity plays in accelerating this change.

Burn-Murdoch, John, and Leslie Hook (2019) 'Survey underscores high levels of US scepticism on climate change', London: *The Financial Times Limited (FT.com)*, September 15.

Poor countries tend to benefit more than rich countries from the Information and Communication Technology (ICT) revolution.

This finding is based on a study of 45 high-income countries, 58 middle-income countries and 20 low-income countries from 2002 till 2017. The conclusion is that in general, ICT increases economic growth in all countries, but poor countries tend to gain more from the ICT revolution.

Appiah-Otoo, Isaac, and Na Song (2021) 'The impact of ICT on economic growth: Comparing rich and poor countries', *Telecommunications Policy* 45(2), p. 102082.

1.4 Why is it useful to study social research methods?

There are a number of reasons for studying social research methods. The most obvious reason is that such methods are used in all kinds of social science studies, and that knowledge about methods is necessary for doing social research.

Social science students have to carry out their own research. In the early stages of their studies, students have to do small and simple research tasks in different types of exercises, and later they have to write a master's thesis and perhaps a PhD dissertation. Many university candidates with a social science degree will develop a career in research at a university or a research institute. In addition, social science graduates who work in non-academic institutions, such as business or public agencies, are often asked to write reports or carry out various types of studies on social phenomena.

In all these types of studies, it is necessary to use social research methods. Thus, studying social research methods is important for several reasons:

- Learning about the whole repertoire of available methods, the main features of each method and the major differences between methods is an important basis for choosing the most adequate method for a particular research task or a specific research question.
- Knowledge about the wide variety of methods for collecting and analysing data is essential for understanding the whole research process in different types of studies.
- Skills in using different methods are necessary for ensuring the quality and ethical basis of the research that is carried out.

Learning about social research methods is not only necessary for carrying out research. It is also very useful for assessing the quality and significance of social research that has been conducted by other students or researchers. Knowledge about different methods is important for understanding the content

of a research report or information about a study that is presented in the media or at conferences.

Our methodological insight enables us to

- assess the quality of the research
- understand the limitations of the study and its findings and conclusions
- compare the study with other relevant studies based on different methods.

Furthermore, studying social research methods is not only useful for social scientists in their professional roles, when they use their social science skills in their work. Knowing about different methods may also be very valuable for all citizens, and for our non-professional participation in social life. Insight into social research methods may be useful if we participate in public debates, in political work or in other voluntary activities. Learning about social research methods is useful for

- knowing how to seek and find information about phenomena and conditions in society
- developing a systematic way of comparing information from different sources
- making critical evaluations of different types of information.

1.5 Dynamics of bureaucracy: Example of a classical social science study

Examples of topics and findings in a variety of recent social science studies were presented in Box 1.1. An example of a particular study will now be examined in more detail, with special attention to the methods that are used in the study. This example is Peter M. Blau's study of bureaucracies (Blau, 1963), which is a very interesting classical social science study. The purpose of presenting this example is to show how particular phenomena in society can be examined by means of different social research methods, how different

methods can shed light on different aspects of the phenomena, and how combinations of different methods can provide holistic insight or comprehensive knowledge about the phenomena that are examined. This example will be referred to in several chapters in this book.

Background and purpose of the study

Bureaucracies are a central and well-known feature of modern society. Bureaucratic organizations are common in both public administration and private business. Research about bureaucratic systems and bureaucratic activity is important within several disciplines in social science. Modern bureaucracies were analysed by Max Weber (1864–1920), who was one of the founders of social science. In particular, he was interested in how typical bureaucracies are structured and organized, and he focused on the characteristic features of bureaucratic activity in its most pure form, as an ‘ideal type’ (Weber, 2013).

With reference to Weber’s analysis, Peter M. Blau (1963) carried out a study of activities and relations in public bureaucracies in the USA in the late 1940s. The report from his studies was presented in 1952, as Blau’s PhD dissertation at Columbia University in New York, where he worked together with the well-known sociologist Robert Merton (1910–2003).

Weber emphasized studies of the stable structural features of bureaucracies as well as the general and enduring characteristics of bureaucratic activity. Blau was more interested in the dynamic aspects of bureaucracies. His purpose was to examine processes, developments and organizational change within public bureaucracies.

Blau focused on the daily activities of two selected government agencies, as well as the interpersonal relations among the employees of these agencies. One of the selected agencies was a public employment agency in an eastern US state.

The other was a department in a US federal enforcement agency, which was responsible for the implementation of two particular federal laws. Blau referred to each agency as a case in his study, and he described his study as a case study of the two agencies.

How the study was implemented

In both agencies, Blau conducted informal conversations, or unstructured interviews, with the administrative leaders of the agency, and he reviewed instructions, rules and other important documents in the agency. Based on this material, he selected one of the departments in each agency for more thorough investigations. Blau worked as an employee in the department for three months. In this fieldwork period, he observed officials in the office, joined them on their field visits and had lunch with them, and took part in informal interaction and social gatherings with the officials. At the same time he carried out more systematic collection of information, based on observation of activities in the department, interviews with colleagues and studies of documents and other available materials. All this information was described in field notes. Thus, in his fieldwork, Blau was both a participant in the department and an observer of the actors and activities within the department. This approach of combining participation and observation is called participant observation.

In addition to the participant observation, a structured questionnaire was used for interviewing each employee in the department. The interview focused on attitudes and assessments regarding work, career, clients and colleagues.

Results and importance of the study

Blau’s study is an example of how social science studies can be based on different types of information, or data, and how different methods can be applied

for collecting these data. Some data were recorded as numbers. These are called quantitative data. For example, Blau observed and counted how many times, or how often, the employees of the agencies were in contact with each other. The structured interviews provided large amounts of quantitative data, for example the number of employees who expressed different attitudes and assessments. The review of files, statistical reports and other available documents provided information about, for example, how many cases or clients had been handled, how long the handling of the cases had taken, and how many employees had been involved in these activities.

Some data could not be expressed as numbers, but were systematized and registered as text. These data, which mainly consisted of the field notes that Blau wrote in the evenings during his fieldwork periods, are called qualitative data. In his field notes, he could register, for example, what types of contacts he observed between the employees, what kinds of collaboration he received information about in informal conversations or unstructured interviews, and what types of administrative procedures and processes he learned about by reading files or other documents.

Blau used different methods for analysing his large and complex data sets. The field notes were already systematically reviewed and analysed during the fieldwork. More extensive analyses were carried out after the completion of the data collection. The qualitative and quantitative data were processed and analysed in different ways.

The different data and methods provided insight into different aspects of the bureaucratic organizations and their activities. Based on the combination of all data and methods, Blau could develop a comprehensive overview and a holistic understanding of the dynamics of these organizations. Thus, the variety of data and methods made it possible for Blau to examine his research questions. Whereas Weber had focused on stable structural features and general characteristics of bureaucracies, Blau's study

showed that bureaucratic structures continuously create conditions that modify or change these structures. Blau's study documented important dynamic features of bureaucracies. He showed that the capacity of bureaucracies to adapt to environmental changes was greater than previously assumed. Inspired by his colleague and supervisor, Robert Merton, Blau interpreted these findings within the general social science perspective that is called functionalism. This perspective implies that organizations or other actors or elements in society will adapt to each other, to their environments and to society as a whole, in ways that function best for the interplay between the different elements of society as well as for the society at large. Since these adaptation processes are regarded as functional, the perspective is described as functionalism.

Thus, the general contribution of Blau's study of bureaucracies was to provide new knowledge and new insight that made it possible to understand bureaucratic organizations and their activities in a new way.

1.6 What is social science?

After this example of a particular social science study, it is reasonable to clarify more generally what social science is. There is a wide variety of studies within social science, and many studies are different from Blau's study of bureaucracies. Nevertheless, it is possible to point out some common features of social science studies and some general characteristics of social science activity.

Social science deals with human beings in different types of societies. It is not limited to studies of individuals or groups of individuals. It also includes research on society as a whole. Major subject areas within social science are people's social background, attitudes and activities, characteristics of individuals and groups, individuals' and groups' relations to one another and to the society, as well as features of the society at large.

Social science is based on systematic research on such topics and includes the knowledge, theories and methods that are developed and used in this research. The historical development of social science is characterized by increasing specialization and differentiation, in several social science disciplines, such as sociology, political science, social anthropology, economics, psychology and social geography. These disciplines may be referred to as the social sciences (plural). However, it seems reasonable to distinguish between the social science disciplines (plural) and social science (singular). Thus, social science consists of the totality of all social science disciplines. In addition, social science includes various research fields or programmes of study, such as media studies, which are based on combinations of elements from different disciplines.

Each discipline in social science may define its distinctive features and identity with reference to its most typical subject areas, its most important theoretical perspectives, or its most common methods. The topics, theories and methods of different social science disciplines will be further discussed in Chapter 2.

However, the distinctions between different disciplines in social science are complicated. First, there are different views on what topics, theories and methods should be most central in each discipline. Within each discipline there are different or competing perspectives on what should be examined, how studies should be conducted, and how social phenomena should be understood.

Second, the boundaries between different disciplines may be unclear and difficult to define. To some extent, different disciplines may include the same topics. For example, there are many overlapping topics between sociology and other social science disciplines. Some theories are emphasized in several disciplines, such as theories on social networks. The most important social research methods are also common for different disciplines. This methodological overlap between disciplines is

particularly important here, because it is an important purpose of this book to present and discuss methods that should be regarded as a common methodological foundation for all social science disciplines. In this discussion, examples and illustrations of the application of different methods are drawn from research in different disciplines.

Another reason why the boundaries between social science disciplines are unclear is that the development of some new disciplines, programmes of study or research fields is based on combinations of perspectives and contributions from several traditional and basic social science disciplines. An example of this is media studies, which is often described as a separate discipline, although it consists of elements from several other disciplines, such as sociology, political science and economics. In general, when elements from different social science disciplines are combined or merged in various multidisciplinary study programmes or research fields it becomes more difficult to define the boundaries between the different disciplines.

Not only the distinctions between social science disciplines, but also the boundaries between these disciplines and other disciplines may sometimes be unclear and unstable. For example, there are different views regarding such disciplines as history and philosophy. Although these disciplines are usually included in the humanities, it is sometimes argued that they should be regarded as social science disciplines. Moreover, a number of disciplines combine social science elements with elements from other fields. For example, media studies combine elements from social science with elements from the humanities, geography includes perspectives and topics from both social science and natural science, and psychology combines contributions from both social science and medicine.

Such ambiguities and variations regarding disciplinary boundaries are reflected in the organization of departments and faculties at

universities and colleges. There are differences between institutions and changes over time as to what disciplines are included in the social science faculties, and how the disciplines are organized in different departments within the social science faculties.

These organizational variations and changes illustrate that there are different views on what social science is. The differences in definitions of social science may be related to the diversity of competing theoretical perspectives within social science. Moreover, the organization of social science faculties at universities and colleges does not only reflect different academic perspectives. It may also depend on the allocation of resources and the availability of competent academic staff, in addition to more general university policies or research strategies.

The fact that social science may be defined and organized in different ways is also important for the reading, understanding and use of this book. Since one of the purposes of this book is to present a common methodological foundation for all social science disciplines, the content and organization of this book must be based on a particular view on what this methodological foundation should include. This view reflects a particular perspective on what social science is. Hopefully, the book will stimulate discussion and reflection, not only about different methodological issues, but also about the nature and content of social science.

1.7 Social science and society

Since social science deals with human beings in different types of societies, the relationship between social science and society is a fundamental topic in the philosophy of social science.

Participants and observers

One feature of the relationship between social science and society is that social science is itself a part

of the society that it studies. For example, social scientists may contribute to public debates by providing knowledge and information for other participants in the debates. However, the social scientists may also participate in the debates themselves, with their own views and arguments. As participants in public debates, they may present knowledge and insights from their research, but they may also, just like other participants in the debate, argue in favour of special values or interests that are not necessarily based on scientific knowledge or theories.

Thus, social scientists are not only observers of the society. They are also participants in the society. In this sense, social science may be regarded as quite different from natural science.

The relationship between social science and natural science has been an important topic in philosophy of science debates. There are different views on the significance and implications of the differences between the two fields of science. However, it is reasonable to argue that the special relationship between researchers and society has different and more challenging implications in social science than it has in other scientific fields. Two major implications of this relationship should be emphasized.

First, the research process may affect individuals or groups that are examined, so that their behaviour during the study is different from their usual behaviour. Thus, the knowledge of the behaviour that is obtained by the researchers may not be accurate and reliable. The knowledge may be biased because of the participants' reactions to being involved in the research process. This methodological problem is called *reactivity*. It is also referred to as a *control effect*.

Second, the researchers' social background and social experiences may affect their perceptions and interpretations of the phenomena that are examined. The knowledge developed by the researchers may not only be a result of how these phenomena

‘really’ are, but also reflect the researchers’ frame of reference and way of thinking. This type of methodological problems is described as *reflexivity*.

Reactivity (control effect) and reflexivity are important challenges in social research, which will be further discussed in several chapters in this book. The potential effects of reactivity and reflexivity on the results of social science studies have to be considered carefully in each study.

Debate about positivism

The relationship between social science and society is a central topic in the debate about *positivism*. In social science, the concept of positivism is associated mainly with Auguste Comte (1798–1857). He is regarded as the founder of sociology as a scientific discipline.

Positivism is a position in the philosophy of science which assumes that social scientific knowledge is developed through systematic studies of ‘positively given’ empirical facts about existing phenomena in society. It is argued that these phenomena exist as observable and objective facts, and that they cannot be influenced or changed by being observed and examined. The main task for social scientists is to discover or reveal the universal laws or regularities of social life and conditions in society. Theories in social science can be constructed as systems of such universal laws. This understanding of social science is based on the assumption that it is possible to establish an absolute boundary between facts and values, and that social scientific studies of social facts are completely independent of both the researchers’ and other persons’ evaluations of these facts. In this connection, it is important that the researcher is not a participant in the activities or processes that are examined, but only an observer of these activities or processes. Social life and society is observed from outside. The positivist position means that social science can relate to facts in society in the same way as natural science relates to facts in

nature. Thus, positivism implies that there is no essential difference between social science and natural science.

In the 1960s, an intense debate about positivism arose in social science. The background for the debate was that the positivistic position at that time was central among leading social scientists, especially in the USA (Gorton, 2010). A debate about positivism was raised, in particular, by Jürgen Habermas and other sociologists and social philosophers at the University of Frankfurt in West Germany. In their academic environment, which was called the Frankfurt School, critical theory was emphasized, and positivism was criticized and rejected as a basis for social science.

One of the arguments against positivism is that phenomena and conditions in society cannot be regarded as objective and observable facts. Human beings in society are independent subjects who, within certain limits, can choose how they want to act and interact. How they really act or interact depends on their intentions and their context. Thus, it is not possible to predict how people will behave, and social conditions may at any time change in unexpected ways. Consequently, it is not possible to identify universal laws and regularities in society. The main task of social science is to interpret and understand particular social phenomena with reference to people’s own intentions and the specific contextual conditions. People’s actions must be understood in terms of the meaning the actions have for the people themselves. Society cannot be observed from outside. Intentional and contextual interpretation and understanding require involvement and empathy with people’s lives and activities. Such involvement and empathy are not obtained if the researchers are only observers. They must also be participants.

Furthermore, it is argued that it is impossible for social science to be outside society. Research on society can affect and interfere in people’s actions

and society's development. Thus, social science will be a part of the context in which people's actions have to be understood. Since social scientists cannot be only observers of the social life they study, they must consider consciously and systematically the implications of the fact that they are also participants in this social life. Social scientists cannot study society in the same way as natural scientists study nature. Thus, the fundamental critique of positivism means that there are considerable and essential differences between social science and natural science.

1.8 Qualitative and quantitative studies

The relationship between qualitative and quantitative studies in social science is another issue in the debate about positivism. However, this relationship is also discussed more generally, independent of positivism.

Although this discussion sometimes refers to qualitative and quantitative *methods* in social science, the distinction between qualitative and quantitative is primarily based on different characteristics of the *data* that are collected and analysed. Simply defined, *quantitative data* are expressed as numbers or in other quantity terms (for example, many–few, more–less or high–low), whereas data are qualitative if they are not expressed in this way. Typically, *qualitative data* are expressed as text. Information on how long (in years) a person has spent in full-time education is an example of quantitative data. Information on what type of education the person has is an example of qualitative data. Based on this, social science studies are quantitative if they are mainly based on quantitative data, while qualitative studies are mainly based on qualitative data.

According to a positivistic understanding of science, social science should be based on the same types of research designs as other scientific fields. Based on this understanding, it may be argued that social science should apply research designs

and methods that have been developed in natural science. More specifically, this means that social science should use experimental research designs and mathematical or statistical methods for analysing quantitative data. It is argued that use of quantitative data is the only scientific basis for examining facts about society. A well-known slogan for this position is that 'if you can't count it, it doesn't count' (Holsti, 1969: 11).

On the other hand, critics of positivism have maintained that, since social science is essentially different from natural science, social science has to use data and methods that are different from those used in natural science. Sometimes it is argued that quantitative data and statistical methods can be used in natural science but not in social science, and that meaningful, non-positivistic studies of social conditions can only be based on qualitative data. This argument implies that any use of quantitative data and statistical methods is regarded as positivistic research. The slogan for this position is that 'if you can count it, that ain't it' (Holsti, 1969: 11).

However, in this book it is maintained that it is not reasonable to make a fundamental choice of either quantitative data or qualitative data for all social science studies. Such a definitive choice between data types should not be justified by reference to philosophy of science or any other principles. There is no absolute connection between positivistic research and quantitative data, or between non-positivistic research and qualitative data. As pointed out above, Blau (1963) used both qualitative and quantitative data in his study of bureaucracies. It would not be meaningful to characterize the quantitative parts of his study as positivistic and the qualitative parts as non-positivistic. The most important features of positivistic research refer to the researchers' relationship to society, as well as their interpretation and understanding of phenomena and conditions in

society. In other words, what is important in this connection is not the type of data that is used in a study, but how the results of the study are interpreted. Not only quantitative but also qualitative data can be interpreted within a positivistic perspective of social science. Similarly, both qualitative and quantitative data can be used and interpreted within non-positivistic or critical research.

The distinction between qualitative and quantitative data is not a pure dichotomy, but refers to a scale, as shown in Figure 1.1. The figure illustrates how different types of data may be placed along the scale, from the most quantitative data to the most qualitative data. The most precise quantitative data type is placed at one of the extreme positions on the scale. These data are called *metric data*. An example of metric data is data about a person's age, expressed as a number of years. The next data type on the scale is *non-metric data* expressed as numbers, which are somewhat less precise than metric data. Non-metric data are, for example, data on a person's education, not in years, but in two (numbered) categories, low education (1) and high education (2). The third data type is even less precise, since data are not expressed as numbers but may still be regarded as quantitative, since they refer to quantity terms. Examples of quantity terms are long (distance), strong (support),

or few (members). Finally, the most qualitative type of data, expressed as text, is placed at the other extreme position of the scale. An example of text data is data on a person's argument in a debate on UK's exit from the European Union (Brexit), expressed as a statement: 'I support Brexit because the UK should be independent'.

A differentiation between qualitative and quantitative data may refer to different points on the scale. In this book, the main distinction between qualitative and quantitative data is defined with reference to point (B) on the scale, as shown in Figure 1.1. This means, as pointed out above, that data are regarded as quantitative if they are expressed as numbers or in quantity terms, whereas data expressed as text are regarded as qualitative data. However, some researchers define the quality–quantity distinction with reference to point (A) on the scale in Figure 1.1. According to this definition, only metric data are regarded as quantitative data, while all other data types are regarded as qualitative data. This definition is preferred mainly by researchers who emphasize advanced statistical analyses in their studies.

Different types of data will be further described and discussed in Chapters 6 and 7.

The study by Blau (1963), which was presented above, shows that quantitative data are most adequate for studying certain phenomena in society,

Quantitative data		Qualitative data	
A		B	
Metric data	Non-metric data expressed as numbers	Data expressed in quantity terms	Data expressed as text
(Age, in years)	(Education, in numbered categories: 1 Low education 2 High education)	(Distance between home and work: A long distance)	(Argument: 'I support Brexit because the UK should be independent')

Figure 1.1 Overview of different types of data (examples in parentheses)

whereas qualitative data are more adequate for examining other social phenomena. Thus, qualitative and quantitative data are not competing, but complementary data types. Furthermore, in practical research, many research designs that are mainly qualitative may include some quantitative data, and many designs that are mainly quantitative may also include some qualitative data.

As exemplified by Blau's study, social phenomena may have both qualitative and quantitative aspects and may, therefore, be examined by means of both qualitative and quantitative data. Such studies are referred to as *mixed methods research*.

As there are different views on how fundamental the difference between qualitative and quantitative approaches is, there are also different views on how meaningful it is to combine qualitative and quantitative data in mixed methods research. One view is that the two approaches reflect so fundamentally different ways of regarding the nature of society and social phenomena that they are too incoherent to be combined in the same studies. The view presented in this book, however, is that mixed methods research is both meaningful and valuable in social science. Compared to strictly qualitative or strictly quantitative studies, research based on combinations of qualitative and quantitative data can contribute to a more extensive analysis and a more comprehensive insight. However, in each mixed methods study, the challenge related to incoherence between qualitative and quantitative approaches should be considered, and how the qualitative and quantitative data are combined should be based on these considerations.

Nevertheless, when planning and designing a particular study, researchers often make a choice between qualitative and quantitative data. This choice is not based on principles, but on strategies. As pointed out above, in principle, neither of the two data types is better than the other, and neither is more scientific than the other. However, in a particular study, one of the data types may be

strategically more adequate than the other for examining the specific research questions of the study and the specific kinds of phenomena the study is focused on. *Research questions*, and their importance for choosing adequate methods in social science studies, are discussed in Chapter 4.

An example of a qualitative study is found in an article by Balderrama and Molina (2009). The study is based on participant observation in three North Carolina farm labour camps in the summer of 2004. One of the researchers participated in the life and work of male farm workers, who were involved in moving plants in a nursery, picking cucumbers and harvesting tobacco. He observed the daily activities of the workers and listened to their conversations in the camps and in the work fields. Two weeks were spent in each of three camps. The observation focused on 'the complexity of farmworkers' survival strategies, their adaptation to life in the camps, and the usefulness of network ties in the adaptation process' (Balderrama and Molina, 2009: 199). Based on field notes from this observation, the article presents quite detailed descriptions of the workers' life and work, as well as 'job seeking, relocation, and survival strategies developed by the distinctive group of farmworking families settled in and nearby the camps' (Balderrama and Molina, 2009: 199). The researchers were particularly interested in the importance of network ties, and they concluded that, whereas such ties are useful for finding temporary jobs, the farmworkers are not able to use networks for sharing resources and improving their long-term socioeconomic prospects.

An article by Yates and Warde (2015) represents an example of a quantitative study. This study is based on data from a survey in Great Britain in 2012, which are compared with results of a similar study in the 1950s. A total of 2784 persons participated in the survey on the web, answering questions about their pattern of eating for the most recent weekday and weekend day before completing the questionnaire. They also answered questions on

their gender, age, education, household structure, employment and occupational status. The analysis focused on the percentages of the respondents who had different rhythms of eating (number of meals per day), and different combinations of food as the content of each meal. Furthermore, the analysis revealed variations in these percentages between different groups of respondents. In the article, the results are presented in tables and figures, or referred to (as numbers) in the text. The findings indicate that, in spite of some variations between groups, the main pattern of three meals per day, as well as the typical contents of the meals, are common to a large majority of the respondents. Compared to the 1950s, the study shows significant changes in the contents of the meals, and somewhat less change in the rhythms of regular eating.

1.9 Facts and values

The relationship between facts and values is a classical and fundamental issue in the philosophy of science, and it has been widely and intensely discussed among social scientists. Understanding this relationship is necessary for doing social research in a meaningful way.

Empirical and normative studies

Both facts and values may be examined in social science studies. Depending on whether facts or values are examined, we distinguish between *empirical* and *normative* studies. Empirical studies emphasize questions about facts (empirical questions). The purpose of such studies is to examine or clarify what the facts in society *are*, for example how the tax system is constructed and how it works. Studies of what values are most important for different groups in society (as a fact) are also regarded as empirical studies.

On the other hand, normative studies refer to specific values and examine how different conditions in society *should be* (normative questions). Such studies may, for example, refer to justice as a value and examine how the tax system should be constructed in order to obtain justice for different groups. Discussions of what should be the content and meaning of specific values, as well as what should be the relationship between different values, are also normative studies.

Although we distinguish between empirical studies, with emphasis on facts, and normative studies, focusing on values, the relationship between facts and values may be problematic. In empirical studies, the clarification of particular facts may be influenced by different values, and in normative studies, different perceptions of facts may influence the analyses of particular values and their implications.

Do facts exist?

As pointed out above, the relationship between facts and values has been a topic in the debate about positivism. In positivism, it is assumed that social phenomena can be studied as a set of objective and observable facts, independent of the researchers' values and evaluations of these facts. On the other hand, the critics of positivism maintain that it is not possible to separate facts from values in such a rigid and absolute way.

In addition to the relationship between facts and values, the concept of fact in itself is an important issue in philosophy of science. This concept has been problematized. For example, among *postmodernists* or *poststructuralists* it is argued that social reality is fragmented, heterogeneous and diverse, and that individuals in society are irrational and confused, characterized by ambiguous and conflicting instincts and wishes. Consequently, there are no consistent, comprehensive or holistic patterns that can be defined unanimously as reality

or social facts, and social scientists' description of reality isn't more objective or truer than any other way of describing reality. In other words, there is not one, but many realities. These realities are defined and constituted by those texts, stories or narratives that describe reality in different ways, and none of these descriptions can claim to be more correct than any other description. Apart from the descriptions of reality, there is no reality. In other words, social facts exist only as descriptions of phenomena in society (cf. Callinicos, 1989; Gorton, 2010).

An implication of this postmodernist view on facts and reality seems to be that the scientific foundation of social research is threatened or abandoned. Postmodernism is based on a relativistic view of social reality and denies that human beings are able to describe and understand society in a rational way. The ultimate consequence of this would be that it is not possible to establish those types of empirical knowledge and theoretical understanding that are central in social science. Then it would also be meaningless to develop and discuss different methods for systematic social science studies.

The perspective of this book is that these postmodernist views on facts and reality are not valid or tenable. Historical experience shows that, even though reality always has been described in different ways, all descriptions are not equally correct. For example, both the claim that there were no Nazi concentration camps during World War II and the numerous descriptions of such camps in several places cannot be equally correct. Based on the well-documented historical knowledge of World War II, it seems strange to assume that concentration camps did not exist as a reality apart from the descriptions of them. This discussion seems to be relevant also for discussions of 'fake news' or 'alternative news' in politics, traditional media and social media.

The history of social science shows that it is possible to develop rational approaches and criteria

for distinguishing between valid and invalid descriptions of social phenomena and conditions, that it is possible to develop more and more reliable knowledge about social reality, and that the validity of different research results can be discussed rationally and critically. Hopefully, this will be demonstrated and elaborated in the presentation of different social research methods in this book. Apart from this clarification of the perspective of this book, postmodernism and its methodological implications will not be further discussed here.

Classical discussions of the relationship between facts and values

Although postmodernist relativism is rejected, postmodernism reminds us that fact is not an uncomplicated concept, and that the relationship between facts and values is not always very clear. Furthermore, due to power structures in society, certain values may be more dominant than others, and dominant values may be more influential than others on how facts are defined and discussed. Powerful groups and their dominant values may also influence the choice of research topics and thus determine what types of facts to be emphasized in social research. Different aspects of the relationship between fact and values have been the topics of classical discussions in social science.

In his book on the rules of sociological method, Émile Durkheim (1858–1917) emphasized that society should be studied as a set of social facts, and that these social facts should be treated and analysed as things. Social facts are regarded as existing and observable phenomena in society. As an observer of society, the social scientist cannot avoid detecting the existing phenomena. When the observed social facts are treated and analysed as things, they are regarded in an objective way: social phenomena are assumed to exist independently of the researchers' or other people's individual

consciousness. Furthermore, considering social facts as things means treating them as data, which are the basis for social science (Durkheim, 1964).

Thus, Durkheim argues that there is a sharp distinction between facts and values. He maintains that facts can be observed independently of the individual researcher's evaluations. However, Durkheim also emphasizes that social science should contribute to the improvement of society. He points out that a sound society is a primary value for social science. Thus, social science is not without values. However, whether or not a society functions in a sound way is not determined on the basis of the individual researcher's own personal values. The soundness or sickness of social phenomena can be regarded as an objective characteristic of the social phenomena themselves. Just as physicians, independently of their own values, diagnose the patients they examine, social scientists can, also independently of their values, diagnose the society they study.

Like Durkheim, Max Weber was also concerned with the relationship between facts and values in social science. In a discussion of the objectivity of science, Weber (2013) maintained that there is a fundamental difference between ideals and realities, or between values and facts. Like all other activity in society, research on society is, directly or indirectly, oriented towards values. However, social science must be based on truth, knowledge and logical principles as primary values. Thus, social science studies must mainly deal with facts. Choice or priorities between values cannot be made on a scientific basis. However, Weber realized that social science will be influenced by values in society, and that social scientists must relate to such values. This may create problems for the objectivity of social science, but such problems can be reduced by distinguishing between ends and means in social action. According to Weber, the primary purpose of social science is to show how different means can be used for obtaining various ends in

society. Priorities between different ends, or goals, are not determined by social science, but through competition or conflict between different values in society.

Weber argues that the implementation of social science studies should be oriented towards facts, but he also points out that the choice of research questions and methodological approaches may be affected by different values. This may influence the direction and development of social science. What is important is that the researchers themselves are aware of this, and that they present, in their scientific reports, the personal values that may have had an impact on the design and implementation of the research. Researchers should be familiar with value debates in society and clarify their own values through participation in these debates. However, each researcher should distinguish clearly between the role as researcher and the role as participant in the debate. Social scientists may express value positions in their research reports, as long as they clarify what are facts and what are values.

Basic principles for social science: Ontology, epistemology and methodology

Even though the relationship between facts and values in social science is complicated, it is possible to formulate a few simple but fundamental principles for social science activity. Just because the relationship between facts and values is complicated, it is also necessary to establish such a foundation for social science. In this connection, it is reasonable to emphasize three major principles, which are based on long traditions and generally accepted views. An overview of the three basic principles is presented in Table 1.1.

Table 1.1 Basic principles for social science

Philosophical basis	Principle
Ontology	Social science is based on truth as a primary value
Epistemology	Perceptions of truth in social science are theoretically, methodologically and contextually founded
Methodology	Evaluations of truth in social science are based on rational and logical criteria

The first principle is that *social science is based on truth as a primary value*. This is an ontological principle, focusing on the existence of particular social phenomena. *Ontology* is the study of being, existence and reality. In social science, ontological discussions include considerations on the existence of different social phenomena. The aims and ambitions of social scientists are that the information they use in their analyses and the knowledge they provide in their analyses are as true as possible. This does not mean that the researchers at any time can be sure that they have reached the final or definitive truth. Other studies, based on different methods, referring to other perspectives, related to different insights and implemented in other contexts, may lead to a revision of the established perception of truth. Previous perceptions of truth may be replaced by new perceptions. By constantly seeking the truth, researchers challenge established knowledge and develop new knowledge.

Perceptions of truth in social science may also be controversial. There may be both uncertainty and disagreement regarding what is true and what is false. It is important for social scientists to be open to criticism and self-criticism, to emphasize different perspectives and interpretations, and to consider alternative views and insights, in order to reach the best possible perception of what is true.

What is true information and knowledge is continuously considered and reconsidered, based on new studies and critical discussions. This leads to the development of truer knowledge. The credibility of the researchers' perceptions of truth is

increasingly strengthened. The knowledge that is developed in this way is not necessarily objective, but may become more and more intersubjective.

The second principle is that *perceptions of truth in social science are theoretically, methodologically and contextually founded*. This is an epistemological principle, emphasizing the development of knowledge about existing social phenomena. *Epistemology* is the study of knowledge, focusing on how knowledge is developed, the sources of knowledge and the conditions for the development of knowledge. What information researchers use in their analyses, and what knowledge their analyses lead to, do not only depend on how these phenomena 'really' are. This may also be a result of the researchers' particular point of view in their studies of the phenomena. Thus, the truth about social conditions that is established by social scientists is theoretically founded.

How particular social conditions are understood by researchers may also depend on the researchers' approaches for collecting and analysing information about these conditions. Thus, the truth about social conditions that is established by social scientists is methodologically founded.

In addition, particular social conditions may be perceived in different ways, depending on when and where they are observed. For example, in some countries and in some periods of time it is a truth that people's social background is the main explanation for their party preferences. However, this relationship is not true always or everywhere. Thus, the truth about social conditions that is

established by social scientists is contextually founded.

The principle of truth as theoretically, methodologically and contextually founded is consistent with the understanding of people's perception of reality as socially constructed. This understanding has been thoroughly discussed by the sociologists Peter L. Berger and Thomas Luckmann (1967). For social science this means that the foundations of truth should be described explicitly, rather than remaining implicit. Research reports in social science cannot be limited to presentation of the knowledge provided by the research, but must also describe the theoretical perspectives, methodological approaches and contextual conditions of the research. With reference to the discussion of facts and values, it should be added that it is also important to describe those values that might have influenced the choice of research questions and perspectives. Such explicit descriptions of the foundations of truth are necessary as a basis for continuous reconsiderations of what is true.

The third principle to be emphasized here is that *evaluations of truth in social science are based on rational and logical criteria*. This is a methodological principle, focusing on procedures for discussing and assessing knowledge about existing social phenomena. *Methodology* is the theoretical analysis of the methods applied in a research field, focusing on the fundamental ways of thinking and understanding that determine the development and application of different methods. Since the truth is continuously reconsidered based on new studies and critical discussion, it is necessary to have clear criteria for these reconsiderations. It is important to have a common understanding of how to examine if something is true, how to determine what is true, and how to discuss and assess such questions. In this connection, rationality and logic are primary values for social science.

This does not imply that human activities or social processes examined by researchers are assumed to be rational or logical. However, rationality

and logic are the basis for the scientific methods that are applied in social science studies, and for scientific argumentation that is used in critical discussion of such studies.

Although methods and approaches may differ and change, the rational and logical foundation of these methods and approaches is common and stable. For example, this means that evaluation of truth in social science is not based on majority opinions, public authorities or historical traditions. Opinions, authorities and traditions can be examined empirically, but cannot be the basis for evaluating the truth of research results. Moreover, such evaluations cannot be based on the researchers' or other individuals' personal experiences, emotions, beliefs or fantasies. All this may be important for the researchers' ability to find relevant information on social phenomena, but cannot be the basis for evaluating the truth of information or knowledge.

1.10 Social science as a process: The organization of this book

Researching society

This chapter has provided examples of social science studies that show how important phenomena and conditions in society can be studied by means of different methods and different types of data. Furthermore, the chapter has described some essential features of social science and its relationship to society, and some fundamental methodological principles and issues in social science have been introduced. Thus, the chapter has demonstrated and discussed how and why we study society.

Fundamental principles and problems in social science will be further discussed in the next two chapters. Chapter 2 is focused on research methods and methodologies in social science. Essential features of scientific methods are described, followed by a presentation of some fundamental issues

related to the use of scientific methods in studies of society, and a discussion of how methods are related to theory as well as empirical evidence in social science. Furthermore, methodological differences between six basic disciplines and five broad theoretical traditions in social science are discussed. Finally, it is pointed out how social science can be based on combinations of disciplines, theories and methods.

Chapter 3 is devoted to the ethics and politics of research. The most important ethical norms in social science are pointed out, and some examples of unethical conduct are presented. Ethics related to the rights of participants are discussed. Furthermore, it is described how technological developments create new ethical challenges for social science. It is discussed how assessment and control of the ethical standards of social research are organized and carried out, and the distinction between ethical norms and legal requirements is emphasized. As to the politics of social research, it is discussed how political dimensions are related to analytical, critical and constructive purposes of social science, as well as to action research, critical research, applied research and basic research.

As demonstrated by Blau's study of bureaucracy, which was presented above (Blau, 1963), social science research is a process. The research process can be regarded from a short-term perspective as well as from a long-term perspective. Each study is carried out as a short-term process, which examines a limited part of society. Blau's study represents a short-term research process, although it lasted for several years, from the planning and first fieldwork in 1948 until the completion of Blau's PhD dissertation in 1952. Many studies are carried out within shorter time periods, but other studies may take even longer than Blau's study.

Together, the large number of social science studies over time are included in the long-term process of social research. This process leads to an increasing amount of empirical knowledge as well as more and better theoretical understanding of

society as a whole. Most often, this process is characterized by a gradual and cumulative scientific development, but sometimes one single study may create a completely new understanding, so that previous approaches and research results must be abandoned. Such sudden and big changes, or revolutions, are called paradigm shifts (Kuhn, 1970). Blau's study is a part of a long-term process of social research on features and activities of bureaucracies in society. This process started with Weber's analyses in the early twentieth century and is still continuing. This extensive scientific process increases our insight into the activities, structures and functions of bureaucracies in different social contexts, in addition to renewing and improving the methods for doing research on bureaucracies.

Thus, in addition to focusing on social processes as central topics for its studies, social research is itself an important social process. This first part of this book is focused on the societal, scientific, methodological and ethical foundations of this research process. The rest of this book is organized mainly with reference to the different elements of the social research process. The purpose is to discuss methods and methodological challenges related to the major elements of the research process.

Designing social research

Part II of this book deals with formulation of research questions and selection of approaches and designs for empirical studies. This part includes Chapters 4–8.

Chapter 4 is focused on research questions. The features of research questions are outlined, different types of research questions are presented, and the relationship between research questions and models is pointed out. The formulation of research questions is described as a systematic process of reviewing literature from previous research, developing the research questions, specifying them

and making them more precise. The importance of research questions in the research process is discussed.

Chapter 5 presents an overview of the importance and features of literature reviews in the research process. Different purposes and types of literature reviews are described, and different steps in reviewing literature are outlined. It is shown how the literature review provides a necessary basis for developing and specifying the research questions as well as for commenting on and discussing the findings and results in the report. Furthermore, the chapter presents advice on where and how to find the literature, and how to select the most relevant literature.

Chapter 6 examines how an empirical study can be designed and organized in order to investigate the research questions of the study. The designs for empirical studies are classified according to the types of sources and types of data that are used in the study. We distinguish three types of data sources: actors, respondents and documents. Each of these can be used for providing qualitative or quantitative data. Based on different combinations of the three types of sources and the two types of data, six major designs for empirical studies are described. The differences between qualitative and quantitative designs are examined, and the possibilities for combining qualitative and quantitative data in mixed methods designs are discussed.

Chapter 7 is focused on sources and data in social science. Different types of sources are described, and it is argued that sources should be critically examined. Furthermore, different units of analysis are discussed, and different types of information are examined. Then it is discussed how the research questions are used to specify and select the types of information that should be collected in a study. It is pointed out that there are many opportunities for social scientists to do secondary analyses, and the use and reuse of available data are discussed. Finally, it is emphasized how big data and social media represent new sources of available data, and how new computer software creates new

possibilities for finding and utilizing available sources and data.

Chapter 8 deals with selection and sampling of units for empirical studies. The chapter starts with a description of the relationship between universe (population) and sample. Then the differences between population studies, case studies and studies based on samples of units are outlined. It is shown how different samples of units are used in different types of studies, and the features of population studies, case studies, as well as different types of samples are described. The main methods for probability sampling and strategic sampling are presented and compared.

Data collection and data quality

Part III deals with the collection of data for empirical studies as well as the quality of the data. This part consists of Chapters 9–16. Chapters 9–10 explain designs for using actors as data source, Chapters 11–12 present designs for respondent data, and Chapters 13–14 examine designs for data based on documents. The description of each design is focused on how the data collection is prepared, and how it is implemented, as well as typical problems related to the data collection. In addition to these chapters on specific research designs, one chapter (Chapter 15) compares qualitative and quantitative data collection and shows how collection of the two types of data can be combined in mixed methods research. Finally, Chapter 16 presents a discussion of data quality, with emphasis on reliability and validity.

Chapter 9 presents ethnography and participant observation, which is a design for qualitative data collection based on observation of actors. It is shown how the researcher combines the observation of actions and relations with involvement in these actions and relations, and the challenges of this combination of roles are described. Furthermore, the chapter presents a discussion of online fieldwork in ethnography and participant observation.

Chapter 10 deals with structured observation, which is a design for quantitative data collection based on observation of actors. It is pointed out how structured observation can be used in field observation, field experiments and laboratory experiments.

Chapter 11 deals with unstructured interviews and focus groups, which is a design for qualitative data collection by asking individual respondents or groups of respondents questions. The similarities and differences between personal interviews and focus groups are pointed out, and the use of focus groups for data collection is explained. Finally, the chapter presents new possibilities and challenges related to online interviews and focus groups.

Chapter 12 presents questionnaires and surveys, as a design for quantitative data collection by asking respondents questions. The chapter examines construction of the questionnaire and describes different ways of collecting the data, including respondent completion of the questionnaire, such as in mail surveys, e-mail surveys or web surveys, and use of interviewers, either in telephone interviewing or in personal interviewing. Special features of survey experiments are also explained.

Chapter 13 is devoted to the use of documentary sources and qualitative content analysis. First, the chapter describes qualitative content analysis of text, which is the most common documentary source. Furthermore, the chapter presents discussions of computer-based qualitative content analysis, and qualitative content analysis of visual materials, as well as holistic studies and discourse analysis based on documents.

Chapter 14 describes quantitative content analysis, based on different types of documents as sources. First, quantitative content analysis of text is presented. Furthermore, the chapter explains the special features of quantitative content analysis of visual materials, and the possibilities and challenges related to automated content analysis, based on new computer software.

Chapter 15 compares qualitative and quantitative data collection and suggests strategies for collecting combinations of the two types of data. Major differences between qualitative and quantitative data collection are pointed out, and four different strategies for combining collection of both data types in mixed methods research are examined.

Chapter 16 is devoted to data quality, with emphasis on reliability and validity as the main criteria for quality assessments. Reliability and validity are defined, and the relationship between the two quality criteria is discussed. Various types of reliability and validity are explained, and different strategies for improving reliability and validity are suggested, for quantitative as well as for qualitative studies.

Data analysis

Part IV deals with data analysis. This part includes Chapters 17–22. In the explanation of data analysis, it is not necessary to distinguish between different data sources, but the difference between qualitative and quantitative data is very important for the choice of methods in the analysis. Thus, Part IV contains two chapters on analysis of qualitative data and two chapters on analysis of quantitative data. Furthermore, it includes a chapter on how empirical findings from both qualitative and quantitative studies can be generalized to other contexts or units than those included in the study. Finally, Part IV contains a chapter which compares qualitative and quantitative data analysis and examines some challenges for analysing combinations of qualitative and quantitative data

Chapters 17 and 18 present methods for organizing, processing and analysing qualitative data. The first of these chapters examine procedures for developing different categories of social phenomena. First, coding of qualitative data is described. Then, it is shown how the coding

forms the basis for categorization and concept development. Finally, the chapter describes the constant comparative method, which is a specific method for generating categories and concepts based on qualitative data

Chapter 18 deals with methods for examining different types of relationships between categories. It is explained how different types can be related to each other and arranged in particular systems, as typologies. It is shown how matrices and figures can be important analytical tools for arranging different text elements in relation to each other, and to summarize and illustrate the relationships between these elements. Furthermore, it is discussed how qualitative data can be used to develop hypotheses and theories, and various methods for developing holistic understandings of specific contexts are reviewed. Finally, the use of computers and various types of software in qualitative data analysis is explained.

Chapters 19 and 20 are devoted to methods for organizing, processing and analysing quantitative data. The first of these chapters starts with a review of some common software packages for quantitative analysis. Then, it is shown how a set of quantitative data can be organized in a data matrix for statistical analyses. Furthermore, the most important methods for index construction and analysis of distributions are described, with a focus on different types of frequencies, graphical presentations and statistical measurements.

Chapter 20 presents analysis of bivariate and multivariate relationships, focusing on three types of methods: cross-table analysis, correlation analysis and regression analysis. First, an overview of the differences between these types of methods is presented. Then the different methods for quantitative analysis of relationships are explained in more detail.

Chapter 21 is concerned with generalization of empirical findings. First, theoretical generalization, based on qualitative data, is examined. A discussion of principles and assumptions is followed by a description of different strategies for theoretical

generalization. Next, statistical generalization, based on quantitative data, is presented. The difference between random and systematic errors is described, followed by a discussion of the probability theory that is the foundation for statistical generalization. Then, different methods of statistical generalization are demonstrated.

Chapter 22 compares qualitative and quantitative data analysis and discusses some challenges for analysing combinations of qualitative and quantitative data in mixed methods research. Major differences between qualitative and quantitative data analysis are pointed out, and five important relationships in analyses of data combinations are discussed.

Asking and answering questions in social science

Part V presents approaches to and perspectives for asking and answering typical questions in social science. This part consists of Chapters 23–26. Three of the chapters refer to the most common types of research questions, which were outlined in Chapter 4. Some of these questions refer to the types of knowledge that are developed in the analyses. Such questions are examined in Chapter 23. Other questions are related to the types of social phenomena that are emphasized in the analyses. These questions are discussed in Chapters 24 and 25. Furthermore, Part V includes a chapter on big data and computational social science, which provide new possibilities as well as new challenges regarding asking and answering research questions.

Chapter 23 deals with description, explanation and understanding. The discussion of descriptive qualitative studies is focused on ethnographic description. Various types of descriptive quantitative studies are identified, including description of distributions, relationships or structural patterns as well as differences or changes. The section on explanation discusses different types of explanations,

how qualitative studies may be used in explanatory research, as well as how quantitative data are used in multivariate causal analysis and experimental studies. The last part of the chapter presents research focusing on understanding, which is typically based on qualitative data.

Chapter 24 is focused on questions related to time, space and level, as they appear in longitudinal, comparative and multi-level studies. Various types of qualitative and quantitative longitudinal studies are explained, and the risk of fallacies related to the time perspective is pointed out. The main features of qualitative and quantitative comparative studies are described, and problems related to linguistic, contextual, conceptual and methodological equivalence are explained. In the section on multi-level studies, contextual analysis is described as a typical example of qualitative studies and it is explained how quantitative multi-level studies combine variables with reference to different levels. The risks of ecological and atomistic fallacies are discussed. The last part of the chapter explains how questions regarding time, space and level may be combined in more comprehensive studies, for example in historical-comparative research.

Chapter 25 is devoted to questions concerning relations, networks and structures. It is explained how relations may be described and classified. Analysis of social networks is described, and the most important network concepts and measures are explained. It is described how social networks can be interpreted as social structures. Finally, the differences between quantitative and qualitative network analyses are discussed, and the advantages of combining qualitative and quantitative data in such analyses are pointed out.

Chapter 26 deals with big data and computational social science. Essential features of big data are described, and distinctions between different types and sources of big data are presented. The development of computational social science is explained, and it is pointed out how computers and computer software make it possible to collect

and analyse various types of big data. Finally, it is discussed how big data and computational social science create new possibilities as well as new challenges regarding asking and answering questions in social science.

Writing and presenting research

The sixth and last part of this book deals with issues related to presenting and publishing research. This part consists of Chapter 27, which is focused on visualization of data and research results, and Chapter 28, which is concerned with the writing of papers, articles, books and other kinds of research reports.

Chapter 27 examines how we can work with data visualization. Such visualization may include presentation of just data as such or research results based on data that are more or less analysed. The purposes of data visualization are pointed out. Similarities and differences between qualitative and quantitative data visualizations are discussed. Furthermore, it is discussed how the technological development and the emergence of more and more complex big data lead to new challenges for data visualization. Finally, the need to avoid deceptive visualization is discussed, and examples of deceptive visualizations are presented.

Chapter 28 is focused on writing about research. While various types of visualizations are typically included in research publications, the emphasis in this chapter is on the writing of the text in publications. The chapter describes different purposes of academic writing and distinguishes between two main formats of such writing, the major report and the article. General features of the writing process and the style of academic texts are presented, and the structure and content of theses and articles are described and compared. Finally, some advice for publishing academic texts is provided.

Major elements in the research process

The main basis for the organization of this book is the typical distinction between four major elements in the research process:

- formulation of research questions and choice of research design (Parts I–II)
- collection of data (Part III)
- data analysis and interpretation (Parts IV–V)
- presentation of the research results (Part VI).

All these elements are important in the long-term development of social science in general. Also, a typical empirical study includes the four elements listed here. However, this is not the case for all social science studies. For example, in some theoretical studies, there is no collection or analysis of empirical data. Moreover, in some empirical studies, there is no collection of new data, because they utilize available data, which have been collected before the study.

The chronological order between the elements of the research process is not necessarily the same in all studies. In this book the elements are presented in an order that is common in many empirical studies. First, one or more research questions are formulated on the basis of previous research and established theory. Then a research design and a methodological approach are selected, the data are collected and analysed, and the findings are interpreted and discussed in relation to theoretical perspectives. Finally, the results of the research are presented and published. However, in several research processes, the chronological order between the elements is different. For example, the research process may start with collection of data, without any clear research question, and the analysis of these data may lead to the formulation of new research questions, rather than final conclusions.

Furthermore, it is not always easy to identify a clear chronological order between the elements of a research process. This may be more difficult in

qualitative studies than it is in quantitative studies. In typical quantitative studies, each element of the research appears as a separate stage in the process. The research questions are formulated before the selection of design and approach. After this selection, the data collection starts, and it is completed before the analysis and interpretation commence. The presentation of the results is the last separate stage in the process. In typical qualitative studies, the elements of the research process are not so much separated from each other in different stages. This is illustrated by the qualitative parts of Blau's (1963) study of bureaucracies presented above. The various elements of this research are not sharply separated from each other in the process. Some elements occurred in parallel and simultaneously, and the researcher switched between different elements at the same time. Furthermore, qualitative studies may start the data collection based on only preliminary research questions and research designs. The data are analysed and interpreted as they are collected and may lead to reformulation of the research questions and collection of additional data, in addition to creating more insight into the phenomena that are examined.

In this book, different methods and methodological issues will be discussed in connection with the main elements of the research process. The differences and relationship between qualitative and quantitative research will be emphasized through the book. Thus, at the outset, it is important to note that the differences between the two types of studies are related both to each element of the research process and to the process as a whole.

1.11 Chapter highlights

- Social science deals with human beings in different types of societies – not only individuals and groups in the society, but also society as a whole.

- Social science is based on systematic research on society and includes the knowledge, theories and methods that are developed and used in this research.
- There are different social science disciplines and different perspectives, theories and methods within each discipline. The purpose of this book is to present a common methodological foundation for social science as a whole. Differences and relationships between qualitative and quantitative research are treated throughout the entire book.
- Qualitative and quantitative data are complementary and can be combined in mixed methods research.
- Social scientists are both participants in society and observers of society.
- The results of a study may be affected by reactivity (control effect) and reflexivity.
- The relationship between facts and values is an important issue in debates about social science methodology.
- Three basic principles for social science activity are emphasized:
 - 1 An ontological principle: social science is based on truth as a primary value.
 - 2 An epistemological principle: perceptions of truth are theoretically, methodologically and contextually founded.
 - 3 A methodological principle: evaluations of truth in social science are based on rational and logical criteria.

1.12 Research examples

I recommend that you read the publications used as research examples in this chapter.

The main example is Peter M. Blau's book on bureaucracies:

Blau, Peter M. (1963) *The Dynamics of Bureaucracy: A Study of Interpersonal Relationships in Two Government Agencies* (rev. edn). Chicago: University of Chicago Press.

The book presents a study of two government agencies in USA, which was carried out in 1948–1949. The study is based on a combination of different types of data and methods and may be regarded as mixed methods research. Compared to Weber's earlier studies of stable characteristics and structures of bureaucracies, Blau focused on changes and functions of such organizations. Originally, the book was published in 1955, but a revised edition was published in 1963. The revised edition of the book includes an epilogue with descriptions and discussions of methodological considerations and experiences during the research process. This methodological epilogue is of particular interest here.

Balderrama, Rafael, and Hilario Molina II (2009) 'How good are networks for migrant job seekers? Ethnographic evidence from North Carolina farm labor camps', *Sociological Inquiry* 79(2), 190–218.

This article provides an example of a qualitative study, based on participant observation in three North Carolina farm labour camps in the summer of 2004. Two weeks were spent in each of three camps. The daily life and work of the farm workers, as well as their families' job-seeking, relocation and survival strategies, were observed. The article presents quite detailed descriptions of these conditions. The researchers were particularly interested in the importance of network ties, and they concluded that, whereas such ties are useful for finding temporary jobs, the farm workers are not able to use networks for sharing resources and improving their long-term socioeconomic prospects.

Yates, Luke, and Alan Warde (2015) 'The evolving content of meals in Great Britain. Results of a survey in 2012 in comparison with the 1950s', *Appetite* 84, 299–308.

This article is an example of a quantitative study, based on a survey in Great Britain in 2012, which is compared with the results of a similar study in the 1950s. A total of 2784 persons participated in the survey on the web, answering questions about their pattern of eating and the food content of their meals, as well as their gender, age, education, household structure, employment and occupational status. The results are presented in tables and figures, or referred to (as numbers) in the text. The findings indicate that, in spite of some variations between groups, the main pattern of three meals per day, as well as the typical contents of the meals, are common to a large majority of the respondents. Compared to the 1950s, the study shows significant changes in the contents of the meals, and somewhat less change in the rhythms of regular eating.

1.13 Student exercises and questions

- 1 What are the main topics in social science?
- 2 Why is social science important for society?
- 3 Why are social scientists both participants in society and observers of society?
- 4 What is the meaning of
 - a reactivity (control effect)?
 - b reflexivity?
- 5 Describe the differences between empirical and normative studies.
- 6 Discuss the principle of truth as a primary value in social science, with particular emphasis on how this principle can be understood in light of the distinction between facts and values.
- 7 Why is truth in social science theoretically, methodologically and contextually founded?

1.14 Recommended literature

McIntyre, Lee, and Alex Rosenberg (2017) *The Routledge Companion to Philosophy of Social Science*. Milton Park: Routledge.

This book is a guide to important themes and debates in the philosophy of social science. It includes contributions from leading scholars in the field, in addition to a comprehensive introduction by the editors. The book is written in an accessible language, and it is useful for undergraduate and graduate students.

Potter, Garry (2017) *The Philosophy of Social Science: New Perspectives* (2nd edn). Milton Park: Routledge.

The book discusses both traditional and contemporary perspectives, and it deals with questions and debates related to the major theoretical positions in the philosophy of social science. Providing a comprehensive and in-depth introduction to this field, the book is accessible for students without any previous knowledge of the themes and perspectives that are presented.

Valsiner, Jaan (ed.) (2019) *Social Philosophy of Science for the Social Sciences*. Berlin: Springer (part of the book series *Theory and History in the Human and Social Sciences*).

This book presents the general background of social science from a philosophical perspective, and it provides directions for social science methodology. It is interesting and relevant for students and researchers in different social science disciplines as well as students of the philosophy of social science.