# METHOD IN SOCIAL SCIENCE

A REALIST <u>AP</u>PROACH



### **Method in Social Science**

In its second edition, *Method in Social Science* was widely praised for its penetrating analysis of central questions in social science discourse. This revised edition contains a new preface with suggestions for further readings and a bibliography. The book is intended for students and researchers familiar with social science but having little or no previous experiences of philosophical and methodological discussion, and for those who are interested in realism and method.

Andrew Sayer is Professor of Social Theory and Political Economy at Lancaster University. He has a longstanding interest in philosophical issues relating to social science, but has always combined this with research on substantive issues—primarily to do with political economy and inequality. His other books include *The New Social Division of Labor*, with R.A.Walker (Blackwell, 1992); *Realism and Social Science* (Sage, 2000); and *The Moral Significance of Class* (Cambridge University Press, 2005).

# **Method in Social Science**

A realist approach

**Revised Second Edition** 

**Andrew Sayer** 



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### Preface to the revised second edition

When I was writing the first edition of *Method* back in the early eighties, it was a time of great interest in the philosophy and methodology of social science; indeed, surprising though it may seem now, it was actually a fashionable topic, and there was a steady stream of books on the subject. Where most of these were primarily critical reviews of established philosophical ideas about social science, its nature and methods, *Method* sought to be constructive and suggest how we should approach social research, instead of merely presenting a critique of others' ideas. Where others presented 'toolkits of research methods' without problematising their presuppositions or considering how we conceptualise and theorise in social research, I saw such matters as fundamental. Where other books seemed to be written for peers and potential reviewers, I wanted to write for students and researchers. As the continued use of the book after 25 years shows, the recipe seems to have worked. Apart from a few minor corrections, I have not changed the text of this edition from that of the last. Of course, much has been written on the topic since then, and so I shall use this opportunity to suggest some further reading here. But first, I want to make some general points about 'method'.

Since the previous editions there has been a growth in some quarters of scepticism about the very idea of prescribing research methods. Surely there isn't a method for doing social research? Surely how we research something will depend on the subject and what we want to find out? Surely no method can give us 'a royal road to truth'? Of course there isn't a single method. If I thought there was, I would have called the book, 'The Method of Social Science'. I also use 'method' in the broad sense of 'approach'. What I argue is exactly that there are many methods or approaches, each having particular strengths and weaknesses, each appropriate for different objects and research questions, and that many research projects will require combinations of them. We also need to think about what is involved in theorising, and recognise that metaphor plays a major role in scientific theories and descriptions, that creativity is needed to find successively better metaphors, and that the interpretation of meaning in society is central to social research. But while all of these are necessary, there is no substitute for attentiveness to the object of study Although we inevitably have to use existing ways of thinking to interpret our object, and while it usually pays to stand on the shoulders of earlier writers, attentiveness to the object and careful description, coupled with reflexivity about how we attend to the world, are vital. Hence not everything about method can be codified.

My colleague John Law recently published a book called *After Method*, in which he argues that the messiness of the social world is such that formal methods and theories have only limited application in many kinds of social research (Law 2004). To some extent I agree. One of the great myths of modernism is that all knowledge can be reduced to laws and that any other kind of knowledge is inferior and dispensible. This belief in formal rationality and a standardised method suitable for all subject matters reached its apogee in social science in positivism in the 1960s and has been in slow decline ever since. As

critical realists have shown, that model isn't even appropriate for natural science, let alone social science, for the world is open, and qualitative change, variation and different degrees of irregularity are normal. And as Aristotle argued over two millennia ago, in addition to theoretical knowledge we also need knowledge of particulars, which generally comes from experience and practical involvement. Aristotle also warned students not to expect more precision than the subject allows. Some subjects are fuzzy and continually changing; where there are gradations there is no point in rendering them as sharp steps. We live in a world of similarities and differences, stability and change, structures, order and mess, necessity and contingency Often our more abstract, 'thin' concepts will identify certain basic common features of particular kinds of society, but to apply them to concrete situations we are likely to need to move to more concrete, thicker concepts, and to use 'thick description'. Sometimes we will need to forge new concepts to deal with novel developments. Hence, conceptualisation, the move from abstract to concrete, and the relation of theory to empirics remain central issues in social scientific methodology

Of course, social science, like natural science, cannot provide 'a royal road to truth'. No matter how well chosen our methods may be, our ways of thinking may still let us down. Knowledge is fallible, that is, capable of being mistaken about its object. The truth or adequacy of our ideas is a practical matter, and something that we can try to improve. To be sure, we can only know things through existing ways of seeing, and can never escape from these and get 'sideways on' to see how our ideas compare with the world. Nevertheless, in many cases, we can still register counter-evidence to our beliefs, as when our expectations fail to anticipate what happens, or when we crash into something. That the revised ideas that might be developed in response to such failures are in principle fallible too doesn't mean there can be no progress. For example, feminist social science has continually revised its claims, but this does not mean it has merely trodden water. It is precisely through continual empirical and theoretical assessment and critique that it has come to enable us to see many things that pre-feminist social science did not, and hence contributed to the development of more true or adequate accounts of society The most simple and basic idea of realism is that the nature of the world is largely independent of an observer's ideas about it, and it is this that explains both the adequacy and fallibility of our knowledge, such as it is. Whether climate change is happening or not does not depend on my views on the matter. Neoconservatism is a social construction, shaped by the ideas of its founders, but it is not my construction and I seem to have failed to make any difference to it. It is whatever it is regardless of what I think, and hence my beliefs about it may be more or less true. Violence against women has clearly been influenced by ideas about women and men and what is legitimate in society at large, but it is not merely a product of an observer's view on the matter; many people do not realise how common it is. If there were no objective situation about which we could be mistaken, then we could just make up any ideas, and they would be infallible; Holocaust denial would be as good as Holocaust confirmation. Realism does not, as many imagine, involve a claim that we can achieve absolute, infallible knowledge. On the contrary, realism and fallibilism presuppose one another. Progress towards greater truth or practical adequacy is possible, but we should not expect perfection, whatever that might mean.

When research students ask me what theories and research methods they should use in interpreting their chosen topic, I generally say *use all you know*—not only the theories and methods you have learned in your subject, but what you know from your experience.

Theories are selective, one-sided, highlighting particular structures and properties; that is their strength, but also their weakness. Further, not all theories relating to a particular topic are direct rivals, but may be partially complementary, so it generally pays to be open to this possibility and to compare different theories and perspectives, although we must also beware of combining ideas that contradict one another. To be sure, everyday knowledge and experience are frequently unexamined, and sometimes misleading, but while they therefore need to be treated with caution, we should beware of the kind of theoreticist elitism that dismisses them in advance as worthless and ideological. Their richness and practical versatility can make them a useful source of insights. For some topics, there may even be works of fiction and literature that provide useful insights, especially into the nature of subjective experience, though of course their appropriateness would have to be assessed in relation to the subject matter (Stones 1996).

There is one fundamental feature of the social world that Method and subsequent writing on critical realism—and philosophy of social science more generally—has not addressed. This concerns the model of human beings that social science either explicitly or implicitly assumes. One of the distinctive features of critical realism is that it combines two models that have often been imagined to be not merely different but incompatible—the human being as causal agent, who makes things happen, the other as 'meaning maker', who interprets the world in innumerable ways. However, although this is an improvement on approaches which assume that we have to choose between these models, it still fails to confront our nature as human animals, that is, beings who have continually to reproduce our conditions of life to survive, and who are capable of flourishing and suffering. We might call this, for want of a better term, a 'needs-based conception of social being' and action, viewing people not only as causal agents and as self-interpreting, meaning makers, but as needy, desiring beings (characterized by deficiency), dependent on others, having an orientation to the world of care and concern. 'Needs' here is used as a shorthand that also covers lack, wants and desire, and includes what might be termed 'culturally acquired or emergent needs' deriving from involvement in and commitment to specific cultural practices, such as the need of the religious to worship. Certainly needs and wants may sometimes be fulfilled or satiated, whether through effort or luck, and they can change, so that we can come to want and enjoy things we previously did not, but neediness in this broad sense is fundamental to us as both biological and cultural beings. Failure to acknowledge human neediness and vulnerability invites misattributions of causality or responsibility, so that, for example, discourses are treated as capable on their own of motivating people. Hermeneutics enables us to view people as meaning makers, but not to understand what it is about them that makes anything matter to them. People do not merely have causal powers, like other objects, or indeed understandings, but have a relation to the world of concern, in virtue of their neediness, vulnerability and dependence.

The treatment of meaning within the needs-based model goes beyond that of hermeneutic approaches in that it deals not only with signifiers and the signified, shared understandings and rule-following, but *significance* or *import*. This is what people refer to when they talk about 'what something means to them', such as what their friends mean to them or what it means to be an immigrant (Sayer 2006). In such cases, they are not merely giving a definition of those things or necessarily a thick description, but an indication of their import or significance for them, how they value them, how such things impact on their well-

being or other things that they care about (Taylor 1985). Thus an ethnographic study might explain, in a matter-of-fact way, how the members of a certain group understand and act towards each other in terms of meanings primarily as conventions or shared interpretations, but give little indication of just why some things have particular import or significance for actors, that is, how they affect things they care about. To the extent that many social scientific accounts ignore this they fail to give an adequate impression of what social life is like from the inside. As I have argued elsewhere, they produce an alienated social science (Sayer 2005; 2009). This is one of the outstanding problems that philosophy and social science have to face.

### Further reading

Much has been written on realism and method in social science since the second edition. Some of this literature addresses rival approaches such as post-structuralism, post-modernism and the turn to discourse, debating to what extent they are compatible with realism (e.g. López and Potter 2001; Pearce and Fauley 2008; Joseph and Roberts 2003). My own *Realism and Social Science* (Sayer 2000) deals with broader issues than *Method*, including responses to post-modernism, discussions of space, narrative and social theory, values in social science and critical social science. Theories of the relation between structure and agency have been extensively debated, with key contributions from Margaret Archer, Rob Stones and Dave Elder-Vass (Archer, 1995, 2000, and 2003; Elder-Vass 2005, 2008; Stones, 1996).

There have been many books and articles on 'using' realism in particular social sciences and research fields. In addition to Danermark *et al.*'s book on explanation (Danermark *et al.* 1997), there are collections covering several disciplines (Cruickshank 2003; Carter and New 2004), and publications on realism in relation to anthropology (Davies 2008), discourse analysis (Fairclough *et al.* 2003), economics (Lawson 1997; Fleetwood 1998) feminism (New 1998, 2003, 2005), international relations (Patomaki 2001), law (Norrie 2009), organizational studies (Fleetwood and Ackroyd 2004), political economy (Jessop 2005), psychology (Parker 1999), and sociology (New 1995). Others have written on realism in relation to more specific theories and topics, such as Marxism (Brown *et al.* 2001), concepts of nature (Benton 1993), the political theory of hegemony (Joseph 2002), 'race' (Carter 2000), quantitative methods (Morgan and Olsen 2005) and health research (Clark *et al.* 2007). This is only a small sample of a rapidly growing literature. Wherever readers are located in social science, they should be able to find discussions of critical realism that relate to their interests

At a more philosophical level, discussions continue on basic arguments of critical realism, such as objectivity and values (Collier 1994, 2003), causality (Groff 2008), new topics such as ethics (Collier 1999; Norrie 2009), and the later work of Roy Bhaskar, the main founder of critical realism. The International Association for Critical Realism and its *Journal of Critical Realism* provides a forum for many of these debates (see also Archer *et al.* 1998).

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### Preface to the second edition

In the 1980s, the ideas of realist philosophy began to make an impact on social science. Yet the gulf between the more philosophical debates and the literature on how we should do social research remains wide, spanned by only the most rudimentary of bridges. Sadly, many social scientists can still only think of 'method' in terms of quantitative techniques, and even though these are now commonly supplemented by qualitative techniques such as participant observation and informal interviewing, the basic activity of *conceptualization*—which no one can escape—remains unexamined. Of course realism has not had a monopoly of innovations in philosophy and methodology in recent years. Particularly important has been the growing interest in language, writing and rhetoric, for these affect not merely how we re-present ideas for others but the very terms in which we think. Unfortunately these advances have been affected or infected by idealist currents which appear to rule out the possibility of any kind of empirical check on social science.

In view of this situation I believe that realism and the question of method remain very much on the agenda and that there is still far to go in developing a constructive discussion of method informed by realist philosophy. This remains the task of this second edition.

The book is intended both for students and researchers familiar with social science but having little or no previous experience of philosophical and methodological discussions and for those who are familiar with them but are interested in realism and method. These two audiences have different interests and preferences regarding style and content. The style and organization are emphatically geared towards the first group (reviewers please note!). I have therefore deliberately avoided spattering the text with name-droppings that would only alienate the first group even if they reassured the second. Issues are selected on a need-to-know basis rather than on one of fashion; philosophical doctrines are only discussed if they have had or are likely to have a major influence on the practice of social science. At the same time I feel confident that the *cognoscenti* will find the realist ideas developed here radically different from those dominant in the literature.

The two possible audiences are liable to ask different questions and raise different objections. Those likely to come from the first type of reader are anticipated and answered in the main text. Answers to probable objections from the *cognoscenti* are restricted to Notes and to Chapters 5 and 8, which provide critiques specifically directed at certain orthodox ideas. The point of this form of organization is to avoid the usual academic's habit of lapsing into writing only for specialists (including reviewers!). I should also perhaps point out that although its arguments are often philosophical, this book is primarily about method in social research, rather than about the philosophy of social science. Many fine books on the latter already exist. While they offer excellent philosophical critiques they offer little constructive comment on the practice of social science. It is this imbalance that I aim to redress.

A few words about revisions for those familiar with the first edition. Second editions are an opportunity to update and another chance to get things right and this is no exception.

It's common today to acknowledge that texts and the way they are interpreted can never be fully controlled by their authors, and often I have been taken aback as much by supporters' readings as by opponents'. But authors do have some responsibility for the reception of their books, so besides adding new material I have tried to correct my own errors and to block some of the misreadings apparent in reactions to the first edition.

The chief surprise to me about the reception of the first edition has been the selectivity of interest. First, for reasons I still do not fully understand, the necessary-contingent distinction introduced in Chapter 3 seems to have overshadowed much of the rest of the book. In this second edition I have tried to clarify this distinction but I remain unconvinced that it warrants the prominence within realism that some interpreters of the first edition gave it. The second kind of selectivity involves a tendency to identify realism with extraordinarily limited tendencies in social theory (e.g. particular angles on marxism) and highly restricted areas of social research (e.g. research on localities). Whatever judgements were made of this research—good or bad—seemed to have rubbed off onto perceptions of realism. Let me therefore stress that, as any scan of the literature will show, realism is a philosophy of and for the *whole* of the natural and social sciences.

Reactions from students have made it clear that a new and fuller Introduction was needed. Apart from this, the main additions concern the nature of theory and its relation to empirical research, practical knowledge, space and social theory, interpretive understanding, research design and an appendix on realism and writing. Further revisions have been made in the light of the experience of empirical research carried out in the last six years. Numerous minor changes have been made to correct and clarify arguments, to add illustrations and to improve accessibility.

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### Introduction

The status of social science is seriously in doubt. Outsiders' attitudes towards it are often suspicious or even hostile, and social scientists themselves are deeply divided over what constitutes a proper approach to social research. The uncertainty has been heightened by increasing doubts in philosophy about traditional views of scientific objectivity and progress. Arguments about whether social science should be like natural science no longer take place on the basis of agreement about the nature and methods of the latter. However, recent developments in realist philosophy have offered new and productive perspectives in both areas that change the whole basis of discussion. In this book I shall try to explain these and show how they can resolve some of the problems that have troubled social scientists.

One of the main difficulties of the existing literature on social theory and the philosophy of the social sciences is that few *constructive* contributions have been made on the subject of method in empirical research, while texts on methods have reciprocated this lack of interest by ignoring developments at the philosophical level and in social theory. For example, much has been written on theories of knowledge, but little about their implications for empirical research. The result is that even where the philosophical critiques have been accepted in principle they have failed to make much difference in practice; indeed, the lack of work on alternative methods has actually discouraged some of the critics and their supporters from even venturing into empirical research. Meanwhile, many of the empirical researchers whose work has been under attack have been content to conclude that the debate is not really relevant to them, or else that philosophical discussions in general threaten empirical research and should therefore be avoided. To get beyond this impasse we must decide whether the critiques imply that we can continue to use the usual empirical methods of hypothesis formation and testing, the search for generalizations and so on, or whether these must be displaced or supplemented by quite different ones. One of the chief aims of this book is to answer these questions.

So much depends in social research on the initial definition of our field of study and on how we conceptualize key objects. Examples of these initial orientations include the adoption of lay categories and classifications in sociology, the equilibrium assumption in economics, the concept of the subject in psychology, concepts like 'interest group' in politics, and the selection of spatial units in human geography. All such starting points are fraught with problems which, whether noticed or not, shape the course of research long before 'methods' in the narrow sense of techniques for getting and interpreting information are chosen. Once these questions of conceptualization are settled—and frequently the answers are matters of habit rather than reflection—then the range of possible outcomes of research is often quite limited. These matters are all the more difficult in social science where our concepts are often about other concepts—those of the society that we study.

In view of this it is quite extraordinary to compare the attention given in social science courses to 'methods' in the narrow sense of statistical techniques, interviewing and survey

methods and the like, with the blithe disregard of questions of how we conceptualize, theorize and abstract. ('Never mind the concepts, look at the techniques' might be the slogan.) Perhaps some would be content to dismiss these matters as questions of paradigms, social theory or intuition, not method, but it is my belief that there is method not only in empirical research but in theorizing, and that we need to reflect on it.

A second major impediment to the development of effective method in social science concerns causation. So much that has been written on methods of explanation assumes that causation is a matter of regularities in relationships between events, and that without models of regularities we are left with allegedly inferior, 'ad hoc' narratives. But social science has been singularly unsuccessful in discovering law-like regularities. One of the main achievements of recent realist philosophy has been to show that this is an inevitable consequence of an erroneous view of causation. Realism replaces the regularity model with one in which objects and social relations have causal powers which may or may not produce regularities, and which can be explained independently of them. In view of this, less weight is put on quantitative methods for discovering and assessing regularities and more on methods of establishing the qualitative nature of social objects and relations on which causal mechanisms depend. And this in turn, brings us back to the vital task of conceptualization.

Social scientists are invariably confronted with situations in which many things are going on at once and they lack the possibility, open to many natural scientists, of isolating out particular processes in experiments. Take an apparently simple social event such as a seminar. It involves far more than a discussion of some issues by a group of people: there is usually an economic relationship (the tutor is earning a living); students are also there to get a degree; their educational institution gets reproduced through the enactment of such events; relations of status, gender, age and perhaps race are confirmed or challenged in the way people talk, interrupt and defer to one another; and the participants are usually also engaged in 'self-presentation', trying to win respect or at least not to look stupid in the eyes of others. This multi-dimensionality is fairly typical of the objects of social science. The task of assessing the nature of each of the constituent processes without being able to isolate them experimentally throws a huge burden onto abstraction—the activity of identifying particular constituents and their effects. Though largely ignored or taken for granted in most texts on method I believe it to be central.

I shall therefore take a broad view of 'method' which covers the clarification of modes of explanation and understanding, the nature of abstraction, as well as the familiar subjects of research design and methods of analysis. The terrain of the discussion is therefore the overlap between method, social theory and philosophy of social science.

In view of this overlap many of the arguments have a philosophical character, involving thinking about thinking. But while I believe social scientists can learn from philosophy they should not be in awe of it, for they can also inform it. (Much damage has been done by prescriptions made by philosophers who have little or no knowledge of what social science involves.) Methodologists need to remember that although method implies guidance, research methods are the medium and outcome of research practice; the educators themselves have to be educated—with frequent refresher courses. Therefore philosophy and methodology do not stand above the substantive sciences but serve, as the realist philosopher Roy Bhaskar put it, as 'underlabourer and occasional midwife' to them.<sup>2</sup> And

social scientists should certainly not fear that philosophical thinking will subvert empirical research, though it may be heavily critical of certain kinds.

Method is also a practical matter. Methods must be appropriate to the nature of the object we study and the purpose and expectations of our inquiry, though the relationships between them are sometimes slack rather than tight. If we imagine a triangle whose corners are method, object and purpose, each corner needs to be considered in relation to the other two, For example, what do differences between the objects studied by social and natural sciences imply for the methods they use and the expectations we have of their results? Is the goal of prediction appropriate to an object such as an ideology? Can social scientific method ignore the understandings of those whom it studies? How far would an interpretive, ethnographic method be appropriate for assessing macro-economic change? To answer such questions we shall have to consider all three corners of the triangle.

Although methodology needs to be critical and not merely descriptive I intend to counter various forms of methodological imperialism. The most important kind, 'scientism', uses an absurdly restrictive view of science, usually centring around the search for regularities and hypothesis testing, to derogate or disqualify practices such as ethnography, historical narrative or explorative research, for which there are often no superior alternatives. Another kind of imperialism, formed in reaction to this is that which tries to reduce social science wholly to the interpretation of meaning. A critical methodology should not restrict social science to a narrow path that is only appropriate to a minority of studies.

The variety of possible objects of study in social science stretches beyond the scope of a single model of research. Consequently, while this book is about method it is not a recipe book, though it is intended to influence the construction of recipes for research, by suggesting ways of thinking about problems of theorizing and empirical research. Examples are therefore intended as just that—not as unique restrictive moulds to which all realist research must conform.

But what is realism? First of all it is a philosophy not a substantive social theory like that of Weber or neoclassical economics. It may resonate more with some social theories than others (e.g. marxism more than neoclassical economics) but it cannot underwrite those with which it appears to be in harmony. Substantive questions like 'what causes inflation?' are different from philosophical questions like 'what is the nature of explanation?'

Things get more difficult when we try to define the content of realism. When confronted with a new philosophical position for the first time it is impossible to grasp much of what is distinctive and significant about it from a few terse statements of its characteristics. Particular philosophies are not simple and self-contained but exist through their opposition to a range of alternative positions. They involve loose bundles of arguments weaving tortuously across wider fields of philosophical discourse. Nevertheless, readers may prefer to have at least some signposts regarding the nature of realism, or rather my own view of it, even if their meaning is limited at this stage. Some of the following characteristic claims of realism may seem too obvious to be worth mentioning, but are included because they are in opposition to important rival philosophies. Some may seem obscure, but they provide at least some orientation to newcomers to realism. Fuller explanations will come later. The wordings represent a compromise between what would be acceptable to those familiar with philosophical discourse and what is likely to be accessible to those new to it.

- 1 The world exists independently of our knowledge of it.
- 2 Our knowledge of that world is fallible and theory-laden. Concepts of truth and falsity fail to provide a coherent view of the relationship between knowledge and its object. Nevertheless knowledge is not immune to empirical check, and its effectiveness in informing and explaining successful material practice is not mere accident.
- 3 Knowledge develops neither wholly continuously, as the steady accumulation of facts within a stable conceptual framework, nor wholly discontinuously, through simultaneous and universal changes in concepts.
- 4 There is necessity in the world; objects—whether natural or social—necessarily have particular causal powers or ways of acting and particular susceptibilities.
- 5 The world is differentiated and stratified, consisting not only of events, but objects, including structures, which have powers and liabilities capable of generating events. These structures may be present even where, as in the social world and much of the natural world, they do not generate regular patterns of events.
- 6 Social phenomena such as actions, texts and institutions are concept-dependent. We therefore have not only to explain their production and material effects but to understand, read or interpret what they mean. Although they have to be interpreted by starting from the researcher's own frames of meaning, by and large they exist regardless of researchers' interpretations of them. A qualified version of 1 therefore still applies to the social world. In view of 4–6, the methods of social science and natural science have both differences and similarities.<sup>3</sup>
- 7 Science or the production of any other kind of knowledge is a social practice. For better or worse (not just worse) the conditions and social relations of the production of knowledge influence its content. Knowledge is also largely—though not exclusively—linguistic, and the nature of language and the way we communicate are not incidental to what is known and communicated. Awareness of these relationships is vital in evaluating knowledge.
- 8 Social science must be critical of its object. In order to be able to explain and understand social phenomena we have to evaluate them critically.

Amplifications of these points could fill many books but the list should provide some orientation.

No book of this kind can expect to be exhaustive in its coverage of the range of methodological issues of interest to social science or of the types of social research to which they might be relevant. As regards the latter, it is quite extraordinary how sociology has had the lion's share of attention in the literature. (Some authors give the impression that social science is reducible to sociology and sociology to the work of Durkheim, Weber and Marx!) This has produced a deafening silence on the social research practice of those in other disciplines such as economics, development studies, psychology and human geography. While I cannot address all of these I shall try to counter the usual sociological imperialism found in most books on method in social science.

Any author in this field works with implicit exemplars of particular areas of social research. Mine are somewhat different from those of existing texts; they come mostly from political economic theory and interdisciplinary studies of industry and urban and regional systems, in which researchers tend to come from geography, sociology, economics,

political science and anthropology. However, no special knowledge of these is needed to understand the examples I have used and indeed many of them come from everyday arguments and events. I have deliberately avoided the philosopher's irritating habit of using trivial examples ('the tree in the quad', etc.). If a philosophical point is worth making it may as well be illustrated by an example which not only gives clarification but suggests its social and practical significance.

A few words are needed on terminology. At the centre of social science's internal crisis have been attacks on orthodox conceptions usually termed 'positivist' or 'empiricist'. So many different doctrines and practices have been identified with these terms that they have become devalued and highly ambiguous, or even purely pejorative. Those who want to continue using them increasingly find that they have to preface arguments with tiresome digressions on 'the real meaning of positivism' and these often generate more heat than what follows. I have therefore avoided using these terms for the most part. This need not prevent one from discussing some of the issues covered by them and indeed it is liberating to avoid the usual burden of unwanted associations that the terms bear. In general I have minimized the use of technical terminology. (That's what they all say, I know, but at least the intention was there!)

The word 'science' needs special comment. There is little agreement on what kinds of methods characterize science beyond the rather bland point that it is empirical, systematic, rigorous and self-critical, and that disciplines such as physics and chemistry are exemplars of it. Most users of the term obviously consider it to have strong honorific associations for few are willing to cede its use to opponents. Those who want to stand apart from the futile academic game of trying to appropriate and monopolize this descriptively vague but prized label for their own favoured approaches are liable to be accused of the heresy of not caring about science and, by implication, rigour and other virtues. While no one is likely to be against virtue, the coupling with exemplars like physics is particularly unhelpful. Not only is there little consensus on what their methods are, it is also not self-evident that they are appropriate for the study of society; indeed, that very question has been at the heart of the philosophical debates. The use of the word 'science' in this strong sense has allowed many authors to prejudge precisely what has to be argued. I therefore want to make it clear that 'science', 'natural science' and 'social science' are used in this book simply as synonyms for the disciplines that study nature and society. At the most, these subjects might be said to distinguish themselves from everyday knowledge by their self-examined and inquisitive character; but that does not say very much and proponents of the humanities may want to include themselves in this description. In other words, my lack of commitment in the use of the word 'science' does not, of course, entail any lack of commitment to the search for rigorous and effective methods of study; rather it is intended to clear away an important obstacle to their discovery.

In view of my attacks on the insulation of discussions of method from social theory and philosophy of science, readers will not expect me to plunge immediately into a discussion of particular methods or techniques. In Chapter 1 we look at knowledge in context, situating social scientific knowledge in relation to other kinds and to practice. Any theory of knowledge is handicapped from the start if it ignores this context for it is likely to ignore how the internal structure and practices of science are shaped by this position. And it is a particularly important consideration for studies of society, for everyday knowledge is both

part of their object and a rival source of explanations. A discussion of the nature of the relation between subject and object in social and natural science then provides a basis for an introduction to the necessarily interpretive and critical character of social science.

Having looked at the context of knowledge, Chapter 2 examines some dominant views of its status and reliability. The time when science was thought to involve the steady accumulation of objective knowledge through a neutral medium of observation has long since gone. In its place there has been a crisis of confidence in which relativism and doubts about the possibility of empirical evaluation and scientific progress have been rife. We begin from the point at which most popular discussions confront the problem—the nature of facts, observation and theory and the relationship between them. To make any progress on this, and in order to say anything sensible about method, particular attention has to be paid to the meaning of 'theory' (woefully underexamined in the philosophical and methodological literature), and to the linguistic and practical character of knowledge. Traditionally doubts about objectivity and the status of scientific knowledge have involved arguments about the nature of truth and how it might be established. In our case we shall approach these matters differently, attempting to counter the neglect of the linguistic and practical character of knowledge, arguing that the concept of truth (and falsity) is incoherent, and that knowledge needs to be evaluated in terms of 'practical adequacy'. The chapter ends with an assessment of the problem of relativism and the resolution of inter-theory disputes.

This prepares the ground for a more focused discussion of method in the ensuring chapters. In these we move continually between the three points of our triangle of method, nature of the object and purpose of study. Following our emphasis on the activity of conceptualization and theorizing we begin in Chapter 3 at the most 'primitive' level with an important but under-analysed aspect of it—abstraction and the relation between abstract and concrete research. We then consider the nature of social relations and structures and how abstraction can illuminate them. We then clarify the nature of generalization, with which abstraction is commonly confused. The chapter ends with a discussion of the realist concept of causation in social science and its implications for methods of causal analysis.

Chapter 4 considers method in relation to ontology or the nature and structure of the social and natural world: first, in so far as it is 'stratified' so that certain objects, such as institutions, have powers emergent from, or irreducible to, their constituents; second, in so far as it consists of 'open systems' in which regularities in events are at best approximate and transitory. The implications of these characteristics for the possibility of discovering laws and for explanation and prediction in social science are then assessed. Further implications of ontological matters for method are then examined: 'rational abstraction' and the need to make abstractions sensitive to the structure of their objects; the relationship of theory and empirical research to the discovery of necessity in the world; and the consequences and dangers of the abstraction from space and time in social science.

Chapter 5 is a digression from the main argument of the book. It is included for those readers who are familiar with more orthodox positions in philosophy and methodology and who may require answers to certain objections which these raise before proceeding any further. Others may wish to 'fast forward' to Chapter 6. The main issues concern a connected set of problems in mainstream philosophy of science, many of them particularly associated with the work of Karl Popper, who has been particularly influential in social science: induction, atomistic ontology, causation, necessity, essentialism, logic and deductivism.

In Chapter 6 we turn to quantitative methods. As before, and in contrast to the usual treatment in texts on method, these are evaluated in relation to their appropriateness to the nature of the object of study, the scope for quantification and the implications of open systems for modelling. The discussion then opens out into a critical assessment of the use of models themselves and the role of assumptions. Lastly I examine the resonances between the use of quantitative positions and particular views of society as atomistic and views of method which misguidedly focus on the search for regularity and neglect conceptualization and interpretive understanding.

The evaluation, or verification and falsification, of social scientific accounts and theories is the subject of Chapter 7. In accordance with our emphasis on the diversity of appropriate methods, we argue that evaluation is a complex and differentiated business, varying according to different objects of study and types of claim. Chapter 8 is a second digression for readers familiar with orthodox philosophy of science, presenting a critique of Popperian views of falsification.

In Chapter 9, we return to problems of explanation in social science. Explanations are shown to be characteristically incomplete and approximate and to vary according to the relationships of our triangle of method, object of study and purpose of research. Yet researchers often over-extend particular approaches, for example in expecting too much of generalization. I therefore discuss the limits and interrelations between key types of research, and try to illuminate them by comparing the capabilities of different kinds of research design. The chapter concludes by returning to the wider context of knowledge with which we began: ultimately our judgements about problems of explanation depend in part on whether we accept or try to resist the critical and emancipatory role of social science.

Finally, in the Appendix, I comment on some implications of recent interest in the fact that scientific knowledge is usually presented in the form of *texts*. Arguably, the rhetoric we use and the form in which we present knowledge are not neutral carriers of meaning but influence the content. Ways in which this can happen are illustrated briefly. Contrary to many commentators, I argue that while these concerns do indeed require further attention, they need not threaten realism.

# 1 Knowledge in context

We feel that even when all possible scientific questions have been answered, the problems of life remain completely untouched.

(Wittgenstein, 1922, 6.52)<sup>1</sup>

'Method' suggests a carefully considered way of approaching the world so that we may understand it better. To make judgements about method it helps considerably if we have some idea of the nature of the relationship between ourselves and that which we seek to understand. Yet it is at this fundamental level that many arguments about method go wrong, for they fail to consider knowledge in its context.

How does social science relate to everyday knowledge in society and to natural science? Does it merely mystify or reproduce the former? Should it emulate the latter? Some of those who have attacked social science for the alleged triviality of its findings and for lacking relevance to practical matters have argued that this is due to its failure to use the 'proven' methods of natural science. Others have argued that triviality is precisely the result of using such methods. There is disagreement about whether it should adopt a 'disinterested' stance with respect to practice or be actively involved in the process of social development. Some see social science as a natural science of society which can be applied through social engineering. Others see their role as having more in common with a therapist than an engineer, their aim being the development of greater self-understanding. Still others consider the role of social science to be the critique of society.

In this chapter, I shall examine in abstract terms<sup>2</sup> the context in which knowledge, especially social science, develops and how it relates to practice and to its objects. This, I hope, will provide a basis upon which the above problems can be discussed in this and later chapters. Some of the questions posed here might seem strangely broad, even for philosophical discussions, and superficially some of the answers may appear obvious. But if such points are ignored or taken for granted, we may fail to notice how they challenge some of the underlying assumptions of social science's practice. Indeed, their significance goes beyond academia to everyday life, for they suggest that in certain ways society systematically misunderstands itself.

One of the most extraordinary features of the literature on the methodology and philosophy of science is the extent to which it ignores practice and the way in which knowledge is involved in what scientists and lay people *do*. If, as is the custom of this literature, we reduce practice to knowledge, knowledge to science, and science to observation and contemplation, then it is small wonder that it should prove difficult to assess the relation between the social and natural sciences and their objects. Although there