Introducing Students to the Generic Terminology of Social Research

Jonathan Grix
Institute for German Studies
University of Birmingham

The aim of this article is twofold: first, to present an accessible way of introducing students to the key generic terms of social science research. There is an obvious need for clarifying the generic tools and terminology of the social sciences across the disciplines, as academics argue past each other, using identical terms but attaching different meanings to them. Secondly, this article presents the interrelationship between the core concepts of social science (ontology, epistemology, methodology, methods and sources). This ‘directional’ and logical relationship needs to be understood, if students – and academics – are to engage in constructive dialogue and criticism of each others’ work.

Introduction

Given the variety of uses of the terms and terminology of social science research, it is hardly surprising that students rarely have a firm grasp of the tools of their trade. Different academics in different disciplines attach a wide range of meanings and interpretations to the terminology of research. It is my contention that before students actually get down to research they need to be exposed to the ‘building blocks’ of generic social research, that is, the basic language of research that comes before they are trained in disciplinary traditions. This may sound trivial, but given the fact that many students – and seasoned academics, for that matter – have difficulty in differentiating between crucial terms such as ontology (that is, what is out there to know about) and epistemology (that is, what and how can we know about it), their subsequent research is bound to suffer, as knowledge of these terms and their place in research is essential to understanding the research process as a whole. In addition to discussing terminological clarity in the social sciences, the following article intends to show the importance of the interrelationship between the core components of the research process: ontology, epistemology, methodology, methods and sources.¹

It is therefore against this background – and the fact that research councils, most notably the ESRC (Economic and Social Research Council), have pushed for an increase in formal research training at postgraduate level – that this article sets out a way of introducing students to the fundamental tools of research in a clear and understandable manner. I start by outlining why it is necessary to learn the tools and terminology of research. The important terms ontology and epistemology, for example, are often shrouded in mystery, partly created by the language with which they are explained, leaving the reader more confused than they were before they
began reading. Once students are clear about the basic terms, it is important to get across to them the interrelationship of a researcher’s ontological position with other key components of the research process, namely epistemology, methodology, methods and even sources. After a discussion of the ‘directional relationship’ (Hay, 2002, p. 63) between these concepts, I present an example using the current debate around the term ‘social capital’ to reveal how this works in practice – that is, how a particular ontological position impacts on, and affects, the subsequent stages of research.

**Learning the tools of the trade**

Why do we need to know and understand standard terms and concepts in social science? A simple example will suffice: consider a would-be bricklayer who does not know the difference between a trowel, spirit level and a chisel. These are the basic tools of his trade, without which no wall can be built. Each tool has a specific purpose and, if used wrongly (or in the wrong order), for example taking a chisel to lay bricks, the results would be disastrous. In research, specific tools have specific purposes and, if one is to employ them correctly, one must first understand what they mean, what they are meant to do and how and when to use them. The lack of clarity and constancy of the social science lexicon has led to a minefield of misused, abused and misunderstood terms and phrases with which students must contend.²

More importantly, a clear and transparent knowledge of the ontological and epistemological assumptions that underpin research is necessary in order:

1. to understand the interrelationship of the key components of research (including methodology and methods);
2. to avoid confusion when discussing theoretical debates and approaches to social phenomena; and
3. to be able to recognise others’, and defend our own, positions.

I would like to reflect on these points. Why is clarity and constancy of terms so important? If we, as researchers, are unclear about the ontological and epistemological (see below for fuller definitions of these terms) basis of a piece of work, we may end up criticising a colleague for not taking into account a factor which his/her ontological position does not allow for. For example, criticising a full-blown positivist (if such a person still exists) for not taking into account hidden structures in society (such as patriarchal structures), when his/her ontological and epistemological position does not allow for such things, is a classic case of arguing past one another. Achieving such clarity in social science work presumes not only familiarity with academic terms on our part, but also that researchers whose work we read are explicit about their own ontological and epistemological positions.³

Thus, I contend that students of social research need to understand and grasp the following before undertaking a fully fledged research methods course and before undertaking any research themselves. The best place to start for students – and I believe undergraduates from all social science disciplines, and not just political science and sociology, will benefit from this – is with the terms ‘ontology’ and ‘epistemology’, as these are central to all social research.
Ontology

Ontology is the starting point of all research, after which one’s epistemological and methodological positions logically follow. A dictionary definition of the term may describe it as the image of social reality upon which a theory is based. Norman Blaikie offers a fuller definition, suggesting that ontological claims are ‘claims and assumptions that are made about the nature of social reality, claims about what exists, what it looks like, what units make it up and how these units interact with each other. In short, ontological assumptions are concerned with what we believe constitutes social reality’ (Blaikie, 2000, p. 8). With this in mind, it is not difficult to understand how different scholarly traditions embedded in fundamentally different cultural contexts can have diverging views of the world and differing assumptions underpinning their particular approaches to social inquiry. For the current discussion it is important to make students aware of the need to understand, acknowledge and defend one’s own ontological position. An individual’s ontological position is their ‘answer to the question: what is the nature of the social and political reality to be investigated?’ (Hay, 2002, p. 63), an assumption which is impossible to refute empirically (see also Hughes and Sharrock, 1997, pp. 5–6). It is only after this question has been asked and answered that one can discuss what it is that we can know about this social and political reality that is thought to exist (see Epistemology, below).

Examples of ontological positions are those contained within the perspectives ‘objectivism’ and ‘constructivism’. Broadly speaking the former is ‘an ontological position that asserts that social phenomena and their meanings have an existence that is independent of social actors’. The latter, on the other hand, is an alternative ontological position that ‘asserts that social phenomena and their meanings are continually being accomplished by social actors. It implies that social phenomena and categories are not only produced through social interaction but that they are in a constant state of revision’ (Bryman, 2001, pp. 16–18). It is clear from these two examples how one’s ontological position will affect the manner in which one undertakes research (see below for a more detailed discussion on this). If ontology is about what we may know, then epistemology is about how we come to know what we know.

Epistemology

Epistemology, one of the core branches of philosophy, is concerned with the theory of knowledge, especially in regard to its methods, validation and ‘the possible ways of gaining knowledge of social reality, whatever it is understood to be. In short, claims about how what is assumed to exist can be known’ (Blaikie, 2000, p. 8). Derived from the Greek words episteme (knowledge) and logos (reason), epistemology focuses on the knowledge-gathering process and is concerned with developing new models or theories that are better than competing models and theories. Knowledge, and the ways of discovering it, is not static, but forever changing. When reflecting on theories, and concepts in general, students need to reflect on the assumptions on which they are based and where they originate from in the first place. For example, can theories generated in Western democracies properly explain phenomena in East European transition states with a 60-year history of
authoritarianism? Two contrasting epistemological positions are those contained within the perspectives ‘positivism’ and ‘interpretivism’. These terms can be traced back, and illuminated by reference to, specific traditions in the philosophy of social sciences. Broadly speaking, the former ‘is an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond’. The latter, on the other hand, can be seen as an epistemological position that ‘is predicated upon the view that a strategy is required that respects the differences between people and the objects of the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action’ (Bryman, 2001, pp. 12–13). It is clear that choosing one of these epistemological positions will lead one to employ a different methodology than one would otherwise, were one to choose the other. It is also clear to see how a researcher’s ontological and epistemological positions can lead to different views of the same social phenomena.

Differing ontological and epistemological views

The assumptions underlying research are thus both ontological and epistemological. Plato’s famous allegory of the cave is instructive for making us aware of the root of ontology and epistemology, for it shows how very different perceptions of what constitutes reality can exist. Prisoners in a cave are chained in such a way that they can only see forwards, to a wall, upon which shadows of artefacts, carried by people behind them, are reflected in the light of a fire. The prisoners give names and characteristics to these objects, which, to them, represent reality. Plato then imagines a scene in which one prisoner leaves the dark cave and sees that not only are the shadows reflections of objects, but also that the objects are effigies of reality. In the text, Socrates says (Plato, 1994, pp. 241–242), in conversation with Glaucon:

‘Suppose someone tells him [the prisoner released from the cave] that what he’s been seeing all this time has no substance, and that he’s now closer to reality and is seeing more accurately, because of the greater reality of the things in front of his eyes – what do you imagine his reaction would be? And what do you think he’d say if he were shown any of the passing objects and had to respond to being asked what it was? Don’t you think he’d be bewildered and would think that there was more reality in what he’d been seeing before than in what he was being shown now?’

The passage cited above mirrors how some people can come to think in certain ways, which are bound by certain cultural and social norms and parameters, for example those established by disciplines in academia. Any premises built upon the experience of the cave dwellers are certain to differ from those who are on the outside. It is for this reason that we need to be aware of, and understand, that different views of the world and different ways of gathering knowledge exist. The order in which I have discussed the two terms in this section is important, for ‘ontology logically precedes epistemology which logically precedes methodology’ (that is, how we go about acquiring the knowledge which exists) (Hay, 2002, p. 5). Interestingly, many research-methods books either discuss these terms the other way around (which, to me, is illogical) or avoid explaining them altogether (which makes it difficult to understand the rest of the book). I now take the argument
about the interrelationship of the key research components one step further by suggesting that methodology logically precedes research methods, which logically precede data sources.

The directional relationship between ontology, epistemology, methodology, methods and sources

It may at first seem somewhat mechanistic and rigid to suggest a directional relationship between the key building blocks of research, but for teaching purposes this simplified overview can help to demystify an often impenetrable discussion. It is of paramount importance that students understand how a particular view of the world affects the whole research process. By setting out clearly the interrelationship between what a researcher thinks can be researched (their ontological position), linking it to what we can know about it (their epistemological position) and how to go about acquiring it (their methodological approach), students can begin to comprehend the impact one’s ontological position can have on what and how we decide to study. Ontology is often wrongly collapsed together with epistemology, with the former seen as simply a part of the latter. Whilst the two are closely related, they need to be kept separate, for all research necessarily starts from a person’s view of the world, which itself is shaped by the experience one brings to the research process. A researcher’s methodological approach, underpinned by and reflecting specific ontological and epistemological assumptions, represents a choice of approach and research methods adopted in a given study. Methodology is concerned with the logic of scientific inquiry; in particular with investigating the potentialities and limitations of particular techniques or procedures. The term pertains to the science and study of methods and the assumptions about the ways in which knowledge is produced.

Methodology is logically linked to, and very often confused with, the research methods employed in a project (see also Blaxter et al., 1997, p. 59). The latter are understood here as, quite simply, the ‘techniques or procedures used to collate and analyse data’ (Blaikie, 2000, p. 8). It is because methodology is concerned with the logic, potentialities and limitations of research methods that the term is often confused and used interchangeably with the research methods themselves. The method(s) chosen for a research project are inextricably linked to the research questions posed and to the sources of data collected, as Figure 1 shows.

Figure 1 may come across as somewhat prescriptive or, in the words of one reviewer of this article, it may remind readers ‘of old style methods books of the 1950s’. However, I decline to change the figure for two reasons: first, the figure shows the directional, and logical, relationship between the key components of research. What the figure does not show is the impact and influence of the questions one is asking, and the type of project one is undertaking – for example, either researching individuals’ attitudes or institutional change – on the methods chosen. However, it is our ontological and epistemological positions that shape the very questions we may ask in the first place, how we pose them and how we set about answering them. Secondly, I fundamentally disagree with the opinion that research may begin at any of the stages in the figure above, for example that a researcher can first choose a favourite or familiar method and then work back through their
methodology, epistemology and ontology. I think we should guard against ‘method-led’ research, that is, allowing ourselves to be led by a particular research method rather than ‘question-led’ research, whereby research questions point to the most appropriate research method. Choosing a research method before having a research question goes against the logic of interconnectedness discussed above and will more than likely result in a poor question/method fit.

Methods themselves should be seen as free from ontological and epistemological assumptions, and the choice of which to use should be guided by research questions. In the minds of many researchers, certain methods are inextricably bound up with certain ontological and epistemological assumptions: for example, try asking an enthusiastic rational choice theorist what he or she thinks of discourse analysis. The important thing to note here is that it is the researcher who employs a particular method in a particular way, thereby associating it with a specific set of ontological assumptions. It is not the method that approaches scholarship with...
pre-existing baggage, but rather the researcher. However, within the academic community, some methods are looked upon and associated with ‘good social science’, whilst others are not. Students should remember that good scholarship is not just the result of a specific method, but the result of how one employs, cross-checks, collates and analyses the data that methods assist one in collecting. Research should be judged on how its constituent parts logically link together, and not by which methods are used. It is important to remember that Figure 1 is intended to show the directional relationship between key components of research; however, this does not mean that one component determines the other – for example, choosing an ontological position close to that favoured by positivism does not mean your epistemological position will automatically be positivist (see Marsh and Furlong, 2002; I return to this below).

In order to clarify some of the points made above, I would like to introduce the so-called ‘social capital’ debate, which lends itself particularly well to illustrating the importance and impact of ontological and epistemological positions on research. The dominant paradigm in this debate is, to some extent, a good example of method-led research. Scholars have focused primarily on using the research method of wide-scale surveys to capture such difficult concepts as interpersonal trust and co-operation.

The ‘social capital’ debate

Broadly speaking, the concept of social capital has come to refer to the by-product of trust relations between people, especially within organisations and associations, in which compromise, debate and face-to-face relations inculcate members with principles of democracy. Active involvement and interest in civic affairs by citizens in a particular region generates a collective good that facilitates collaborative action for all. It is through networks of civic engagement that information flows and is able to be accessed by others. It is the supposed link between the existence of social capital in a specific region or local area and the positive effect this has on governmental and economic performance – and ultimately on democratic governance – that has caught the eye of researchers and policymakers alike. Generally speaking, the higher the stocks of social capital in society, the more democratic that society is likely to be (Grix, 2001b, p. 189).

The first, and by far the most dominant, paradigm in social capital research, the ‘Putnam School’, consists of a group of scholars who seek to employ Robert Putnam’s definition of social capital and, more importantly, though to different degrees, emulate the quantitative research methods employed by Putnam to ‘measure’ the concept in his study of democracy in Italy (for example, see Hall, 1999; Whiteley, 1999; Stolle and Rochon, 1999). This research paradigm has advanced our thinking on the concept of social capital, but has done so in keeping with the ontological and epistemological underpinnings of Putnam’s own work.

Putnam and his followers subscribe to similar ontological, epistemological and methodological premises as the fathers of political culture research, Gabriel Almond and Sidney Verba, whose path-breaking work first appeared in the 1950s. Culture, and in the example here, social capital, is thus seen as something psychological
that can be measured at the individual level in a positivist manner through the concrete and quantifiable answers to survey questions (McFalls, 2001, p. 2). The vast majority of research on social capital uses survey questions that were not designed for capturing indicators of what is thought to make up social capital (an excellent exception to this general rule is Richard Rose’s social capital survey discussed in Rose, 1999). Rather, answers to questions designed for other purposes are drawn on to prove the existence or demise of trust and cooperation and thus social capital in society.

The ‘Putnam School’ of social capital research can be said to be based on a foundationalist ontology (that is, they believe the world exists independent of our knowledge of it) and a positivist epistemology. This starting point leads to the favoured methodology of this group. This broad term entails the reflections on the potentialities and limitations of particular techniques or research methods. Importantly, methodology constitutes a choice of research strategy, which for the ‘Putnam school’ is quantitative, involving a large number of cases. This choice leads them to adopt a particular research method, the survey or questionnaire, from which the respondents’ answers to questions are aggregated and manipulated statistically. Thus, a quantitative measure of cognitive responses to survey questions (the data sources) is used as an index to decide whether social capital is in decline or not. It is not difficult to see how the researchers’ starting point (ontology) is crucially linked to the other building blocks of research. To reiterate the above example: a foundationalist ontology (that is, one based on an ‘unquestionable set of indisputable beliefs from which our knowledge may be logically deduced’: Hughes and Sharrock, 1997, pp. 4–5) generally leads to a positivist epistemology (that is, one that focuses on observable and measurable social phenomena). These initial positions lead to a methodology that chooses quantitative research strategies over qualitative and which points the researcher to the specific method of a survey. Ironically perhaps, in the above example scholars adopting a foundationalist ontology, which would usually mean that they believe that social phenomena must be directly observable, are studying something that cannot itself clearly be observed: trust. The concept of trust has a strong normative content, something that a positivist epistemology is not well suited to unpacking.

If one does not conceive of social capital as the sum total of cognitive responses to questions of trust, but, rather, as something that is affected by, and adheres in, social structures, one’s research design would look quite different. I would argue, for example, that the social context in which the networks of relations between people are embedded is essential to the analysis. Thus, as William Maloney et al. (2000, p. 16) suggest, drawing heavily on James Coleman (1988), social capital ‘should be understood as context dependent, and as a resource that inheres in the relations between actors’. The wider factors that shape and inform local social contexts are surely related to a country’s mode of governance? Whether a particular mode of governance is more conducive to the creation or existence of social capital than another is rarely discussed by the ‘Putnam School’ because of their ontological and epistemological position. Governance can range, for example, from centralist to federalist or liberal democratic to authoritarian. Does a decentralised form of governance translate into politics closer to the people? Is it more sensitive
towards, and committed to, local causes? Does it foster greater participation of citizens in the political process, thereby creating ties between community groups and local governments?

Let us look at a different research strategy that starts from a different ontological and epistemological position: I believe that institutional structures and modes of governance matter for the existence, maintenance and creation of social capital. Such an approach lays emphasis on the ‘conditions of action’ or structure that either facilitates or constrains action (Sibeon, 1999, p. 142). Analysing social capital as a dependent variable – as opposed to an independent variable as most social capital researchers do – one affected profoundly by the type of governance in a given country and its specific set of political structures and institutions, allows for an understanding of different social contexts within which interaction and relations between actors and institutions are carried out. Interestingly, asking people directly how they experience their own relations both within and between specific groups can lead to very different results to those of the ‘Putnam School’ above. For example, in a small pilot project focusing on the ability of ‘Euroregions’ to foster trust and social capital between bordering countries (Germany and Poland), the following results were found. First, after extensive interviews with both sides of the Euroregion, it emerged that one of the biggest hindrances to the development of ‘between group’ social capital was in fact the lack of ‘within group’ social capital among actors keen to promote cross-border co-operation on the respective sides of the border. Thus a different research strategy was able to unravel the lack of opportunity structures through which information could be shared and personal, face-to-face interaction could take place. In this way we were able to gain an overview of the structures that existed to promote or hinder co-operation and understand the actors’ perception of these structures, including their assessment of their access to specific information channels.

This type of ‘interpretivist’ approach – that is, one that emphasises the role of both agents and structures – is the opposite of the agent-centred approach outlined above. The ontological position differs from the ‘Putnam School’ and can be termed ‘anti-foundationalist’ (that is, not all social phenomena are directly observable, structures exist that cannot be observed and those that can may not present the social and political world as it actually is) (cf. Marsh and Smith, 2001, p. 530. This then affects my epistemological position (that is, the extent to which I believe we can know about social capital in a specific context and the extent to which we can generalise beyond it) and, of course, my methodology (that is, the research strategy chosen to acquire this knowledge). Within this methodology I have chosen the precise procedures or research methods to get at empirical questions which have been affected by my ontological and epistemological positions.

Table 1 summarises the differences in the two approaches I have outlined. Both approaches may, for example, choose similar research methods to undertake the research, but they would lay emphasis on different methods and sources and would analyse the data differently, depending on their ontological and epistemological positions. For example, the ‘alternative approach’ may well use quantitative data
to gain an understanding of the volume of trade across the border between Germany and Poland, but the researcher would not necessarily make inferences or generalisations from this data.

The implications for research and policy of such an interconnectedness of the building blocks of research are obvious. In America, for example, the term social capital – as propounded by Putnam et al. – has been hijacked by idealists on the ideological right in a debate about de Tocqueville’s America, involving a return to the morals and the ‘good’ society of that era, for this ideal is equated with a reduction in crime and a return of civic-ness. If, however, the assumptions upon which this paradigm is based are shown to be shaky, a question mark remains over their final conclusions.

Finally, it is worth emphasising that it is unimportant whether students – or readers, for that matter – agree with the arguments put forward in the social capital debate outlined above. The point is to see how different starting points of research lead to different research strategies.

### Conclusion

In summary, this article has highlighted the need for students to learn the tools and terminology of generic social science research. In order to produce good, clear scholarship, researchers need fully to understand the language with which they are working. Some researchers may consider the key terms discussed above as belonging to, and separate from, practical, on-the-ground research. This is wrong on several accounts (see Danermark et al., 2002, p. 4). An understanding of ontology and epistemology is important for students because they need to understand the logic behind the approaches taken by others and they need to make their own approach very clear. This will allow them to defend their own positions, understand other researchers’ positions and fully grasp the directional relationship of key components of the research process. The latter is essential if students wish to go

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**Table 1: Two approaches to studying social capital**

<table>
<thead>
<tr>
<th>Approach</th>
<th>Ontology</th>
<th>Epistemology</th>
<th>Methodology</th>
<th>Methods</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Putnam School’</td>
<td>Foundationalist</td>
<td>Positivist</td>
<td>Choice of quantitative strategy, using multiple cases</td>
<td>Survey</td>
<td>Survey data</td>
</tr>
<tr>
<td>Alternative approach</td>
<td>Anti-</td>
<td>Interpretivist</td>
<td>Choice of both quantitative and qualitative strategy, usually using small number of in-depth cases</td>
<td>Interviews; surveys</td>
<td>Interview transcripts and survey data</td>
</tr>
</tbody>
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on to engage properly in academic debate and produce quality and transparent research projects.

Notes

1 For a fuller treatment of the tools and terminology of research, see Grix, 2001a.

2 For an in-depth discussion on the need for terminological clarity in the social sciences, see Gerring, 2001.

3 There is an obvious and urgent need for agreement on the meaning of specific generic terms across the disciplines in the social sciences to prevent the confusion that surrounds many concepts at present. I do not have the space to develop this argument here; suffice to say that this should not be understood as a call for unity of methodological approaches, as diversity is essential for the vibrancy of the social sciences, but rather a call for clarity on key terms that can travel across disciplines.

4 It is important to remain aware that researchers may begin with a foundationalist ontology and then proceed to a realist epistemology, which differs greatly to a positivist epistemology. On critical realism as an approach in the social sciences see Danermark et al., 2002.

5 For the full study see Grix and Knowles, 2001.

6 This type of analysis, sometimes termed the ‘double hermeneutic’, is not acceptable to our full-blown positivist mentioned earlier, thus he/she would use different methods to get at such information or he/she would not consider an actor’s perception of his/her situation of relevance.

7 Within the real project, in-depth elite interviews were complemented by a theoretical approach and documentary analysis, see note 5.

8 De Tocqueville, 1969.

References


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