two

THEORY AND METHOD IN SOCIAL SCIENCE RESEARCH

General comment

The material in this chapter, especially in the first section on methodological theory, is usually seen by students as quite demanding. This is because it is essentially philosophical in nature, especially when a discussion of paradigms is involved. To my students, I sometimes describe this area as a 'swamp' – an area where you can venture in, sink down and, if you are not careful, disappear without trace! It is not that the material is not interesting. On the contrary, I find it very interesting, and some students do too (though not all). That's why it is possible to sink down in it – it can be quite seductive. The problem with this is that it delays the planning and development of research projects, sometimes for no profit and for a very long time.

In view of this, some lecturers might decide to skip this section of the chapter (and perhaps the whole chapter), with a view to returning to it later. The book is written so that this is possible – that is, going straight from Chapter 1 to Chapter 3 is not really a problem. On the other hand, if a simplified version of section 2.1 is helpful, I think it comes down to these main points:

- Methods do not exist in a vacuum (though they are often presented as though they do); beneath methods, necessarily and inevitably, lie paradigms.
- Essentially, paradigms are assumptions – about the nature of the world we want to study, and about how we can study it; assumptions are unavoidable – some assumptions must be made, otherwise we cannot proceed in research. The only issue is whether or not we recognise the assumptions we make.
- There has been 'paradigm turmoil' in the last 40 or so years (the so-called 'paradigm wars'), and paradigm proliferation; one result is multiple possible paradigms, especially within qualitative research.
- Fortunately, the literature on multiple paradigms now seems to be converging and simplifying into two main positions – positivism, on the one hand, versus either interpretivism or constructivism, on the other; simplified working versions of these main paradigm positions are useful – see Chapter 2, p. 31; the examples below might also be helpful.
- This leads to two main approaches in research. One main approach is 'paradigm driven' – the researcher starts with a paradigm position, and derives research questions and methods from

this position; the other main approach is 'pragmatic' – ignoring paradigms, this researcher has questions needing answers, and strategy, design and methods are chosen to collect and analyse the data to answer these questions. In my view, both approaches have their place, but the researcher should be:

(a) aware of which approach is being adopted;
(b) able to articulate the approach taken; and
(c) able to justify and defend the approach taken.

Whether (c) is necessary or not depends on the prevailing attitudes in particular universities and departments. I have found great variation on this issue in different universities I have visited. Some insist that only paradigm-driven research is acceptable, especially at doctoral level. As I have said in the chapter, I have no objection at all to paradigm-driven research – I have supervised a great deal of it. My only objection is to the view that **all** research must be paradigm-driven. I see a great role for pragmatic research, especially where research questions come from professional and other workplaces.

The paradigm wars accompanied the major change that occurred in social science research methodology between around 1960 and 2000, as qualitative methods became more and more accepted.

The essential nature of this change is this:

Qualitative methods moved from a marginal position in social science research in (say) 1960 to a mainstream position in (say) 2000.

This is a massive change, which raises many fundamental sociology-of-knowledge questions – for example: Why did this change occur? Why did it occur at this time? How is this change related to changes occurring in other fields? And so on. These issues are beyond our scope here. But I think it is important that students are fully aware of the major change which occurred.

Paradigm examples

1. The baseball umpire story:

BOX 2.1
Three baseball umpires

The umpire in baseball stands close-up behind the pitcher. His job is to call pitches as 'strikes' or 'balls'. These calls are crucial in shaping the course of a game, and its outcome. Three baseball umpires were discussing the problem of subjectivity in their calls. After a long and lively debate, Umpire A attempted closure, saying:

'Well, I call 'em as I see 'em. You can't do more than that.'
'No,' said Umpire B, 'I call 'em as they are – that's the way to do it.'
'You're both wrong,' said Umpire C. 'They ain't nothing 'til I call 'em, then that's what they are.'

These views roughly equate to the views from three main paradigms. Thus:

Umpire A in an interpretivist (specifically, a symbolic interactionist – see section 7.4).
Umpire B is a positivist.
Umpire C is a constructivist.

2. Positivism – the clock on the wall. As a naïve and oversimplified – but useful – introduction to one of the main aspects of positivism, I ask students to turn and look at the clock on the wall of the classroom (if there is no clock, any physical object will do). Then I get them to look out of the window, with the clock behind them. I then ask the apparently dumb question 'Is the clock still there?' Of course, students will say yes, without being able to see it. The point is that they are assuming it is still there (and so am I). This is because we see the clock (an example of physical reality) as having an objective, external, independent existence. We assume that its existence does not depend on our being able to see it, that its existence is objective, external to us and independent of us. We cannot prove this, we can only assume it.

This makes us positivists when it comes to physical reality. But social scientists study social reality – not physical reality – so what assumptions do we want to make about social reality? About leadership, or classroom climate, or social relationships? Do such things exist objectively, externally and independently, in the same way as (we assume) the clock on the wall does, or does their existence somehow depend on our perceptions of them and interactions with them? Such issues usually produce lively class discussion, and we begin to see that positions other than positivism might be possible when it comes to studying social reality. We are, of course, talking here about the ontological dimension of paradigms –assumptions we make about the social reality we might want to study. This example is intended only to introduce students to the idea – there is of course much more to positivism than that. And, as noted already, these philosophical, paradigm-related issues can become a swamp. As course lecturer, I find it is necessary to drag ourselves out of these swampy issues, in order to proceed. But my objective is to make students aware that these issues exist.

Substantive theory

Again, some lecturers may decide to skip this section and return to it later. But I think it is important, and I think it is good for students to develop a fundamental understanding of the structure of scientific knowledge, and of the role of explanatory theory (and of levels of abstraction) in this structure.

Description versus explanation

This distinction is important and useful. It is not really difficult to understand but it can cause surprising confusion. To simplify it, I use the example of the weather

(see Exercises and Study Questions no. 5). I ask students to describe the weather outside today, and together we develop a description of the weather, using terms and concepts such as temperature, wind, rainfall, clouds, and so on. With this description in front of us, I ask what question has guided the development of the description. It's not long before we agree that the central question so far has been 'What is the weather like today?'

I then ask what other questions might be stimulated by the description we have. Again, it's not long before the questions why (and/or how come) emerge. So now we have the question 'Why is the weather like this today?' Answers are developed in terms of high and low pressure systems, prevailing winds, latitude and altitude, and so on, providing an explanation of today's weather. Discussion then centres on comparing the description with the explanation, and the different nature and functions of each.

As we saw in Chapter 1, the real goal of scientific inquiry is explanation, but description is a necessary step on the way to this goal. Another very good way to show the distinction is to focus on the different central questions driving description and explanation:

Description answers the question What? (Or more specifically, What is this like?)
Explanation answers the question Why? (Or, more specifically, Why is it like this?)
(Note that sometimes the explanation question may be How? As in, How does this come about?)

While explanation itself is a difficult philosophical question (what exactly is it, and how do we know when we have an explanation?), the version of it I stress here is that explanation uses more abstract concepts – that is, concepts at a higher level of abstraction – to account for the more concrete (i.e. less abstract) things we have in the description.

If time permits, I move on to discuss the relationship between explanation and prediction, and the role of prediction in the hypothetico-deductive model of research. This leads into later discussions of the hypothesis, its nature and role, and its relationship to theory.

Levels of abstraction

This concept is absolutely central to so much that goes on in research, but it is very seldom laid bare and discussed. For example, it comes up here in considering the structure of scientific knowledge, it comes up in quantitative research (with test or questionnaire items at the lowest level of abstraction, variables at the next level up and factors at another level up again) and it comes up in any type of inductive analysis with qualitative data.

Here, it is shown clearly in Figure 2.1 (p. 19 in the text), labelled the structure of scientific knowledge. At the lowest level, there are separate, individual, discrete facts. These are then grouped into empirical generalisations, at a higher level of

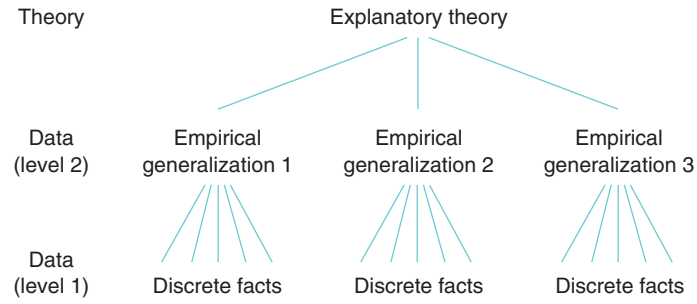

Figure 2.1 The structure of scientific knowledge (nomothetic view)

abstraction. Over the top of these sits explanatory theory (which accounts for these empirical generalisations) at a still higher level of abstraction.

The clearest example of this that I know of comes from Durkheim's work on suicide, from a very long time ago. He takes a series of empirical generalisations about suicide – produced by descriptive research – and theorises 'upwards' to an explanation, which he calls a 'law of suicide'. I have often wondered why more of this sort of work has not been done in different areas of social science – begin with developing and collecting empirical generalisations in an area of research, and then theorise upwards to an explanation of them. I think it is a powerful model, and one which is not difficult for students to understand. I am aware of criticisms of what Durkheim has done here, but my purpose in using this example is to illustrate the power of this way of thinking and of organising knowledge.

This important concept of levels of abstraction (which is really so simple and automatic in our thinking) will come up again later, especially when we look at grounded theory analysis in Chapter 8.

Theory verification – theory generation

I don't think this point requires much labouring at this stage, as long as students understand the basic difference talked about here. It is captured very nicely by Harry Wolcott's 'theory first' or 'theory after' distinction. Do we start with a theory and then test the theory by testing hypotheses which follow from it? This is theory verification research. Or do we start with research questions and aim to finish with a theory which explains whatever we have found? This is theory generation research.

Again, I think the real issue here is helping to clarify for students this tricky term 'theory' and its possible role in a piece of research. Once we see that theory means explanatory theory, we can then use this theory-first/theory-after distinction in planning research – it really comes down to: Are we aiming to test a theory or to develop a theory? This distinction can help greatly in proposal writing.

It is interesting to note that theory-first research is exactly the type of 'hypothetico-deductive' research described and which, when I was a doctoral

student in North America in the 1960s, we were all encouraged to do. Theory-after research is exactly what grounded theory as a method was developed to do, which helps to explain grounded theory's popularity. Grounded theory is not the only approach to theory-after research, however.

Question–method connections

The general point here is straightforward enough – that all of the different parts of a research project should fit together, and question–method fit is an important part of that. Internal validity is a good term to describe the extent to which a project 'hangs together' – internal consistency and coherence are others. It is usually very obvious, in reading and assessing proposals, when there is misfit.

A common example of misfit is:

Research questions are phrased in terms that carry quantitative implications, and then a strategy and design is proposed which is qualitative. Thus, research questions are phrased in terms such as 'What is the relationship between X and Y?' or 'What are the determinants or correlates of X?' As a general point, it is worth studying the phrasing of research questions carefully, to see what methodological implications might be involved. A qualitative research strategy and design is described, with no mention whatsoever of grounded theory (this is fine) or of aiming to develop theory. But then, suddenly, the data analysis section proposes to use grounded theory analysis. Grounded theory analysis is a powerful and useful method for analysing qualitative data, but its purpose is to generate grounded theory. So it is inconsistent to use grounded theory analysis unless the overall purpose of the study is to generate, develop or discover theory. This needs to be set up early in the proposal and to be reflected in statements of purpose and research questions.

Pre-specified versus unfolding: structure in research questions, design and data

In the 1960s and 1970s, when quantitative research was very much the fashion in the social sciences, it was customary for research proposals to be very detailed indeed, with the research questions, as well as all aspects of the strategy and design, data collection and data analysis, specified in advance, i.e. pre-specified. There was even a view (common in more than one university) that the thesis itself could be written ahead of the empirical research being done, with only the entries in the data analysis tables missing. Such was the level of pre-specified structure expected. All steps to execute the research (including writing the report) could be laid out in advance, and all that remained was to carry them out.

The development, rapid acceptance and spread of qualitative methods in empirical social science research changed all that. Here, things are often much more open-ended, and it doesn't make much sense to try to insist on the same high level of pre-specified structure. It is better to think in terms of an unfolding (or emerging)

study, where aspects of the design and methods, and perhaps even the research questions themselves, unfold as early empirical work is carried out.

For example, a few years back, I was approached by a group of psychiatrists to assist in planning research into youth suicide in Australia. As we discussed the possibilities, it became clear that, as a group, we did not know enough about the phenomenon to know which questions to ask, let alone what sort of research to design. In such circumstances, the only sensible thing to do is to plan a two-stage study.

The first stage is deliberately open-ended and exploratory, and its purpose is to map out the area for research, and identify key research topics and questions which can be used in subsequent studies.

The second stage, and subsequent stages, can then be much more focused and structured, whether quantitative, qualitative or mixed methods studies are involved.

I think this sort of situation occurs quite frequently, but, at the same time, I would add two qualifications.

The first is that a proposal for an unfolding study is typically rather harder to write than that for a pre-specified one. What complicates the task is that the case needs to be made for an unfolding study and reasons given for it. This results in a different sort of proposal. My experience is that proposal review committees are happy enough with this, as long as a case is made and the reasons and logic behind the proposed approach are made clear.

The second is that sometimes what we think is a 'new' topic or research question, about which not much is known, is not as new or as unknown as we think. This is often true in applied social science research areas where professionals in the area are planning research – for example, in a professional doctorate programme. They have a topic of interest, and it is quite possible that little has been reported on the specific topic in the literature. However, they also have substantial professional and experiential 'knowledge' of the topic. This knowledge should not be wasted, and sometimes an important part of the research planning/question development process is teasing out this knowledge, and getting it 'out on the table'. My experience is that this can be especially true in professional doctorates – mature and experienced professionals return to university to do a piece of higher degree research, and, for whatever reason, they feel that their experiential knowledge has no place in the university context. As a supervisor, I feel exactly the opposite. I see it as part of my job not to devalue this knowledge, but rather to tease it out and let it feed into and inform the development of research questions and the project. This interacts with question development work – Chapter 3 especially.